How's the Water?

Upper Rio Grande Basin Advisory Committee Meeting

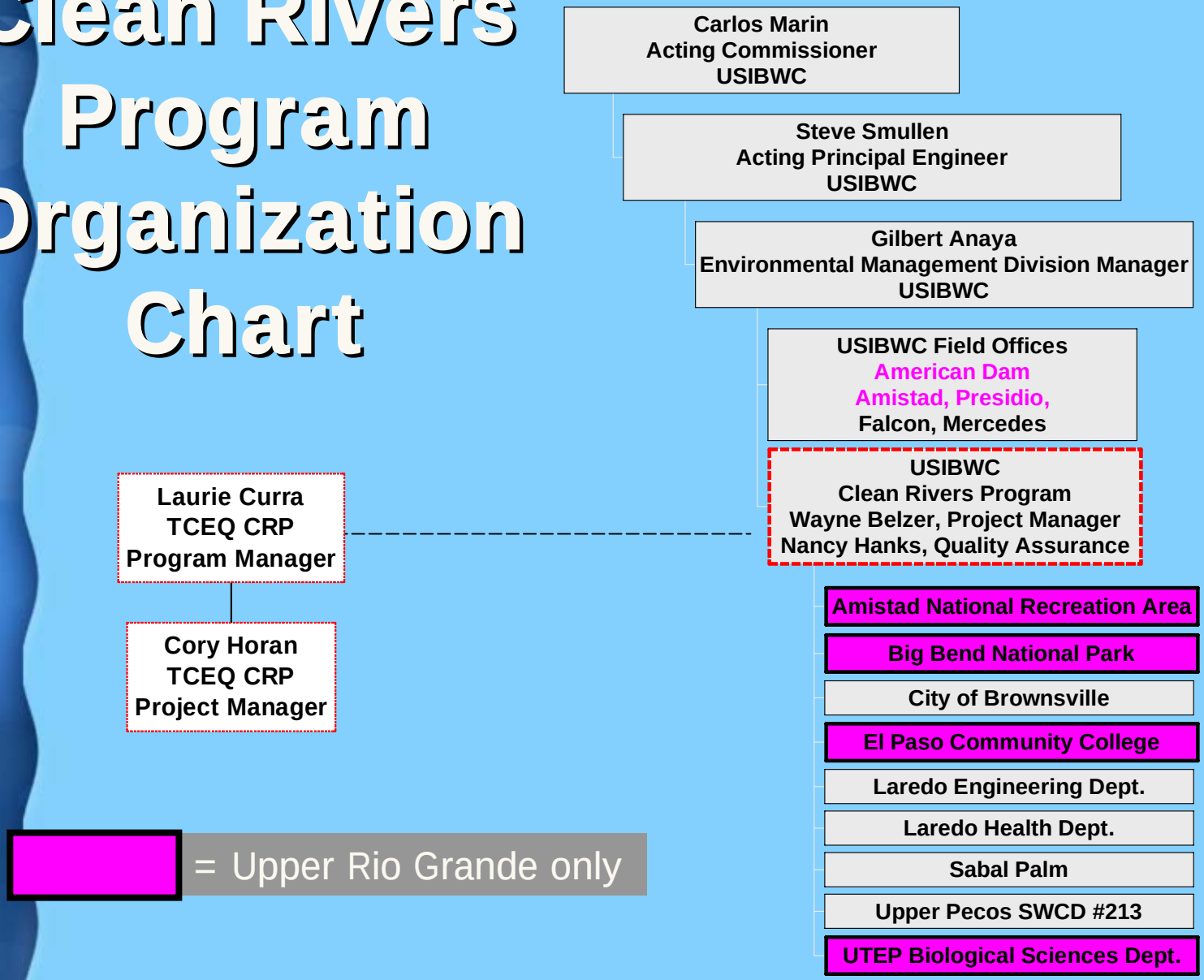
August 9, 2006

Nancy N. Hanks, Ph.D.
Quality Assurance Officer
Texas Clean Rivers Program

What Do We Do?

- Routine Monitoring of the Upper Rio Grande
  - Fixed locations, regular intervals
  - 24 sites in Upper RG for FY2007
- Collect and report water quality data
- Special Studies
  - Big Bend NPS—5 real-time monitoring stations

Clean Rivers Program Organization Chart



Monitoring Partners

10 partners in the Upper Rio Grande help monitor, collect, and analyze samples:

- Amistad National Recreation Area (monitoring)
- Big Bend National Park (monitoring and gauges)
- EPCC (monitoring)
- EPWU (lab analysis)
- TCEQ-El Paso (monitoring and gauges)
- UTEP (monitoring)
- USGS (monitoring and gauges)
- USIBWC Field Offices:

  American Dam, Presidio, Amistad

What Do We We Monitor?

Field Data

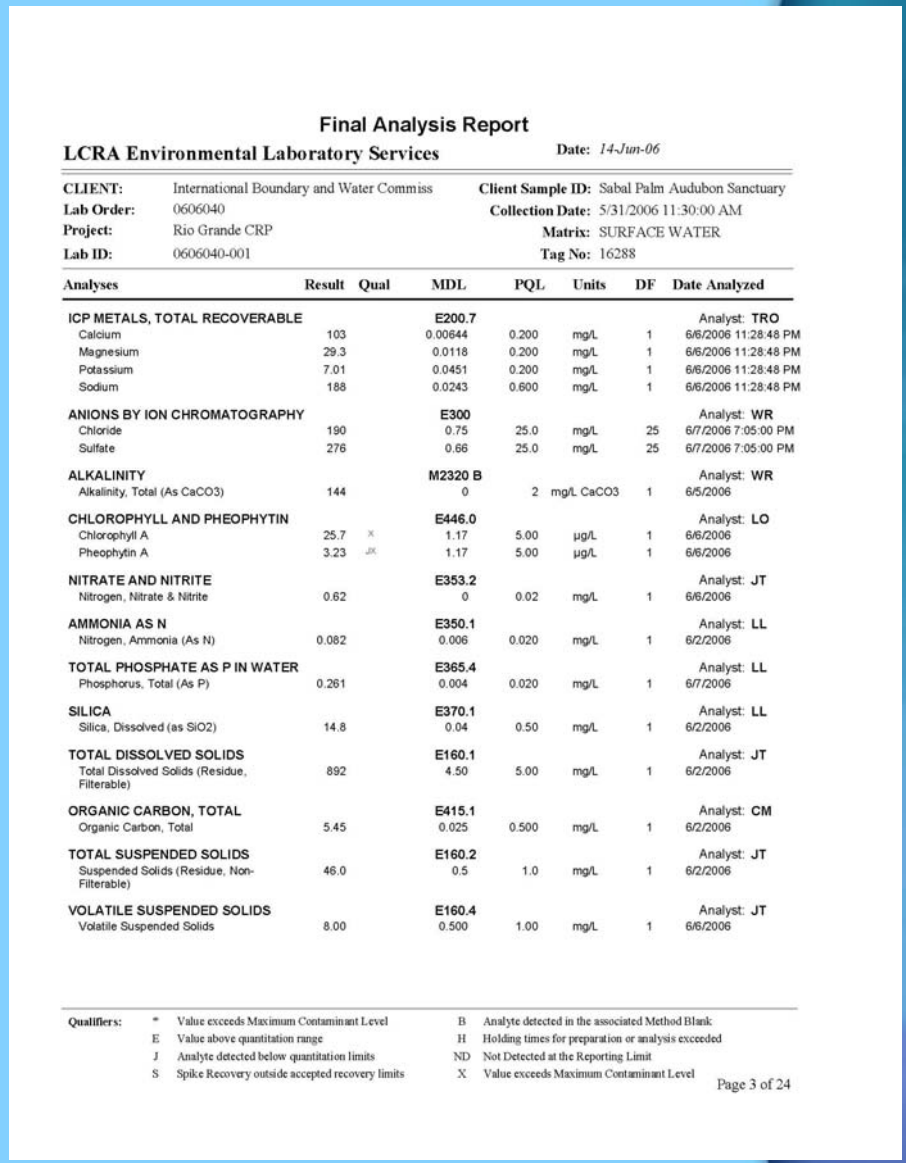
00010	**26**	WATER TEMP (deg C only)
00020	**21**	AIR TEMP (deg C only)
00400	**8.4**	pH (SU)
00300	**6.3**	D.O. (mg/L)
00094	**878**	SPECIFIC CONDUCTANCE (uS/cm)
00078	**.03**	SECCHI DISK (meters)
72053	**3**	DAYS SINCE LAST SIGNIFICANT PRECIPITATION
01351	**5**	FLOW SEVERITY 1-no flow 2-low 3-normal 4-flood 5-high 6-dry
00061	**--**	INSTANTANEOUS FLOW (cfs)

89835	**--**	FLOW MEASUREMENT METHOD 1-Gage 2-Electric 3-Mechanical 4-Weir/flume 5-Doppler
74069	**--**	ESTIMATED FLOW (cfs)
89861	**--**	STREAM WIDTH (meters)
82903	**--**	WATER DEPTH (meters)
31616	**--**	FECAL COLIFORM (CFU/100 ml)
31699	**--**	E. coli (MPN/100 ml)
31609	**--**	E coli. Geometric Mean (MPN/100 ml)
89966	**1**	WEATHER 1-clear 2-cloudy 3-overcast 4-rain
89965	**3**	WIND INTENSITY 1-calm 2-slight 3-moderate 4-strong
89010	**2**	WIND DIRECTION 1-north 2-south 3-east 4-west

What Do We We Monitor?

Lab Data

- Nitrogen
- Phosphorus
- Chloride
- Sulfates
- Chlorophyll a
- Pheophytin
- Total organic carbon (TOC)
- Total dissolved solids (TDS)
- Total suspended solids (TSS)
- Bacteria



Final Analysis Report

LCRA Environmental Laboratory Services **Date:** *14-Jun-06*

CLIENT:	International Boundary and Water Commiss	**Client Sample ID:**	Sabal Palm Audubon Sanctuary
Lab Order:	0606040	**Collection Date:**	5/31/2006 11:30:00 AM
Project:	Rio Grande CRP	**Matrix:**	SURFACE WATER
Lab ID:	0606040-001	**Tag No:**	16288

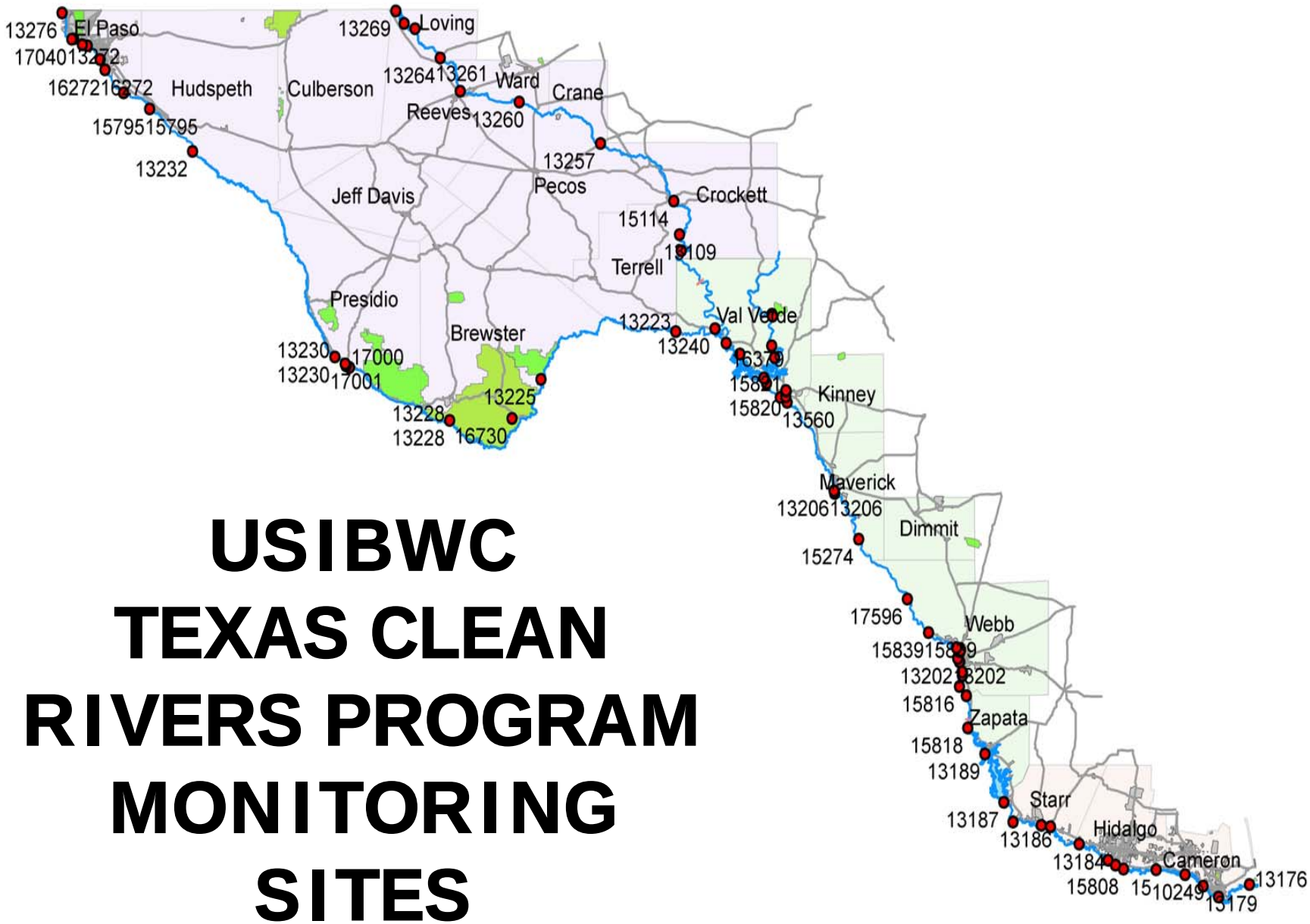
Analyses	Result	Qual	MDL	PQL	Units	DF	Date Analyzed
ICP METALS, TOTAL RECOVERABLE			**E200.7**				Analyst: **TRO**
Calcium	103		0.00644	0.200	mg/L	1	6/6/2006 11:28:48 PM
Magnesium	29.3		0.0118	0.200	mg/L	1	6/6/2006 11:28:48 PM
Potassium	7.01		0.0451	0.200	mg/L	1	6/6/2006 11:28:48 PM
Sodium	188		0.0243	0.600	mg/L	1	6/6/2006 11:28:48 PM
ANIONS BY ION CHROMATOGRAPHY			**E300**				Analyst: **WR**
Chloride	190		0.75	25.0	mg/L	25	6/7/2006 7:05:00 PM
Sulfate	276		0.66	25.0	mg/L	25	6/7/2006 7:05:00 PM
ALKALINITY			**M2320 B**				Analyst: **WR**
Alkalinity, Total (As CaCO3)	144		0	2	mg/L CaCO3	1	6/5/2006
CHLOROPHYLL AND PHEOPHYTIN			**E446.0**				Analyst: **LO**
Chlorophyll A	25.7	X	1.17	5.00	µg/L	1	6/6/2006
Pheophytin A	3.23	JX	1.17	5.00	µg/L	1	6/6/2006
NITRATE AND NITRITE			**E353.2**				Analyst: **JT**
Nitrogen, Nitrate & Nitrite	0.62		0	0.02	mg/L	1	6/6/2006
AMMONIA AS N			**E350.1**				Analyst: **LL**
Nitrogen, Ammonia (As N)	0.082		0.006	0.020	mg/L	1	6/2/2006
TOTAL PHOSPHATE AS P IN WATER			**E365.4**				Analyst: **LL**
Phosphorus, Total (As P)	0.261		0.004	0.020	mg/L	1	6/7/2006
SILICA			**E370.1**				Analyst: **LL**
Silica, Dissolved (as SiO2)	14.8		0.04	0.50	mg/L	1	6/2/2006
TOTAL DISSOLVED SOLIDS			**E160.1**				Analyst: **JT**
Total Dissolved Solids (Residue, Filterable)	892		4.50	5.00	mg/L	1	6/2/2006
ORGANIC CARBON, TOTAL			**E415.1**				Analyst: **CM**
Organic Carbon, Total	5.45		0.025	0.500	mg/L	1	6/2/2006
TOTAL SUSPENDED SOLIDS			**E160.2**				Analyst: **JT**
Suspended Solids (Residue, Non-Filterable)	46.0		0.5	1.0	mg/L	1	6/2/2006
VOLATILE SUSPENDED SOLIDS			**E160.4**				Analyst: **JT**
Volatile Suspended Solids	8.00		0.500	1.00	mg/L	1	6/6/2006

Qualifiers:					
	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	S	Spike Recovery outside accepted recovery limits	X	Value exceeds Maximum Contaminant Level

Page 3 of 24

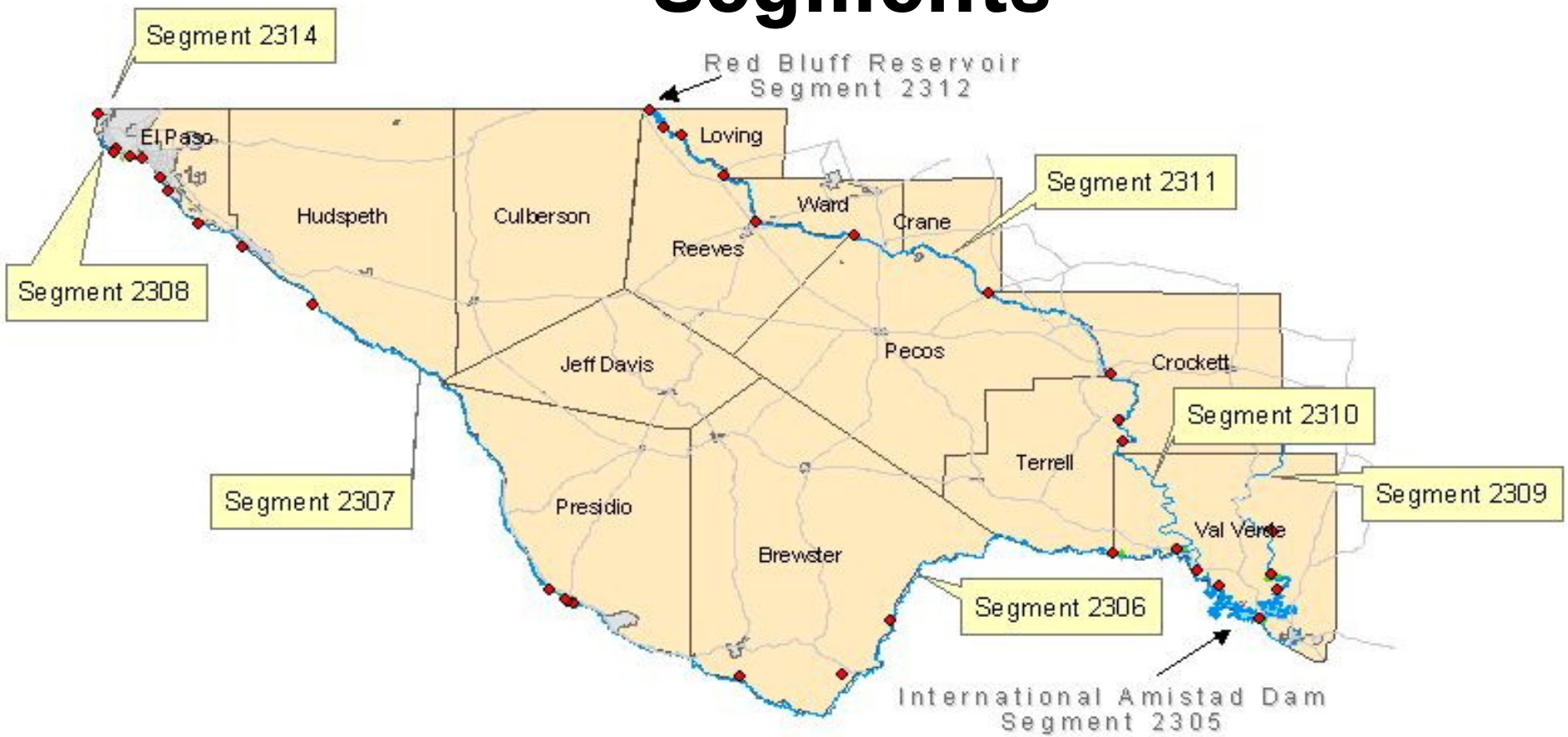
2004 Texas Water Quality Inventory and 303(d) List

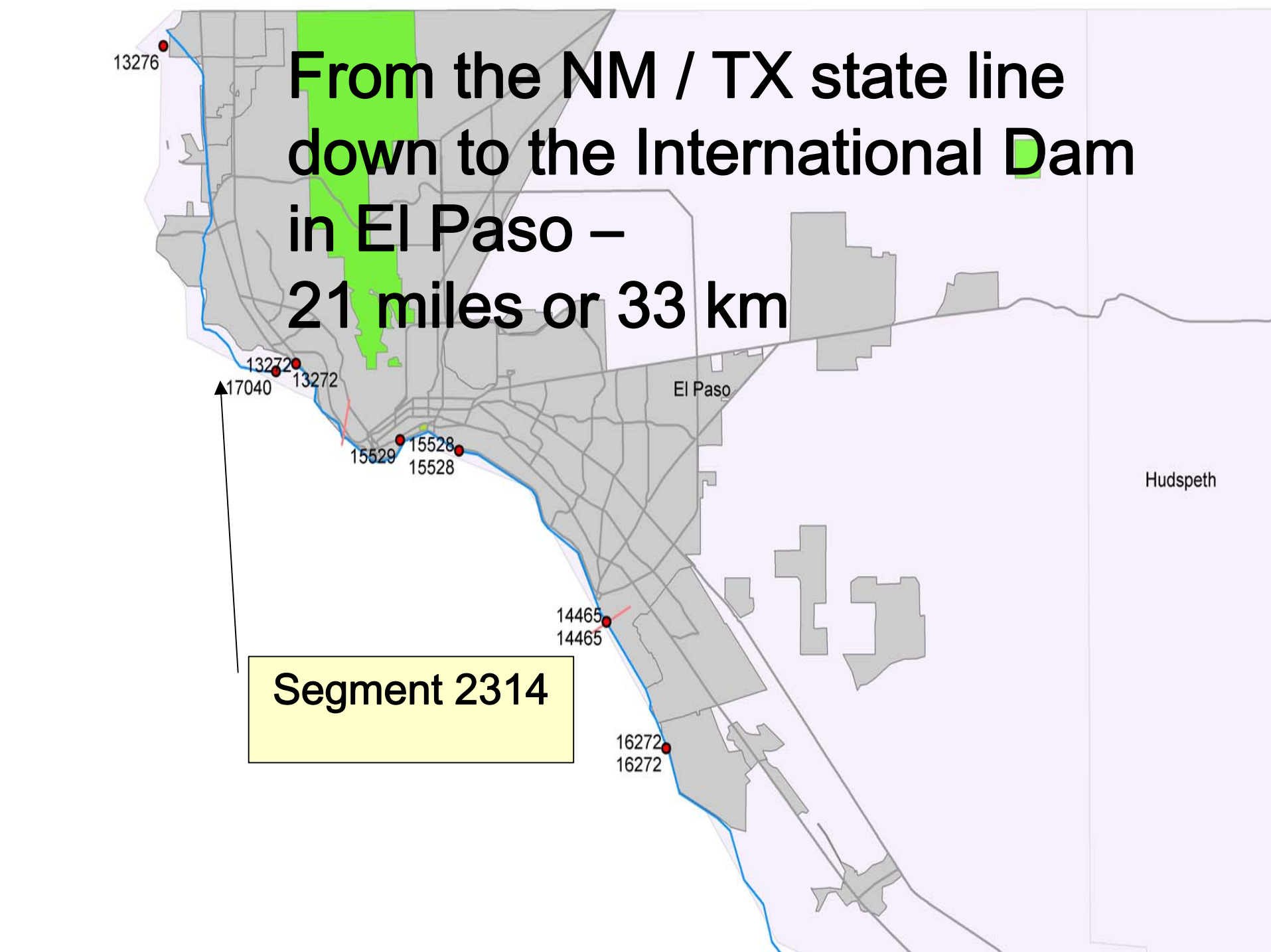
- 2006 List comes out this fall
- TCEQ updates every 2 years
- Reviews the past five years' worth of data collected by many organizations statewide
- 2004 List provides an assessment of water quality results collected between March 1, 1998 and February 28, 2003
- Basis for 2006 Basin Highlights Report



USIBWC TEXAS CLEAN RIVERS PROGRAM MONITORING SITES

Upper Rio Grande Basin Segments

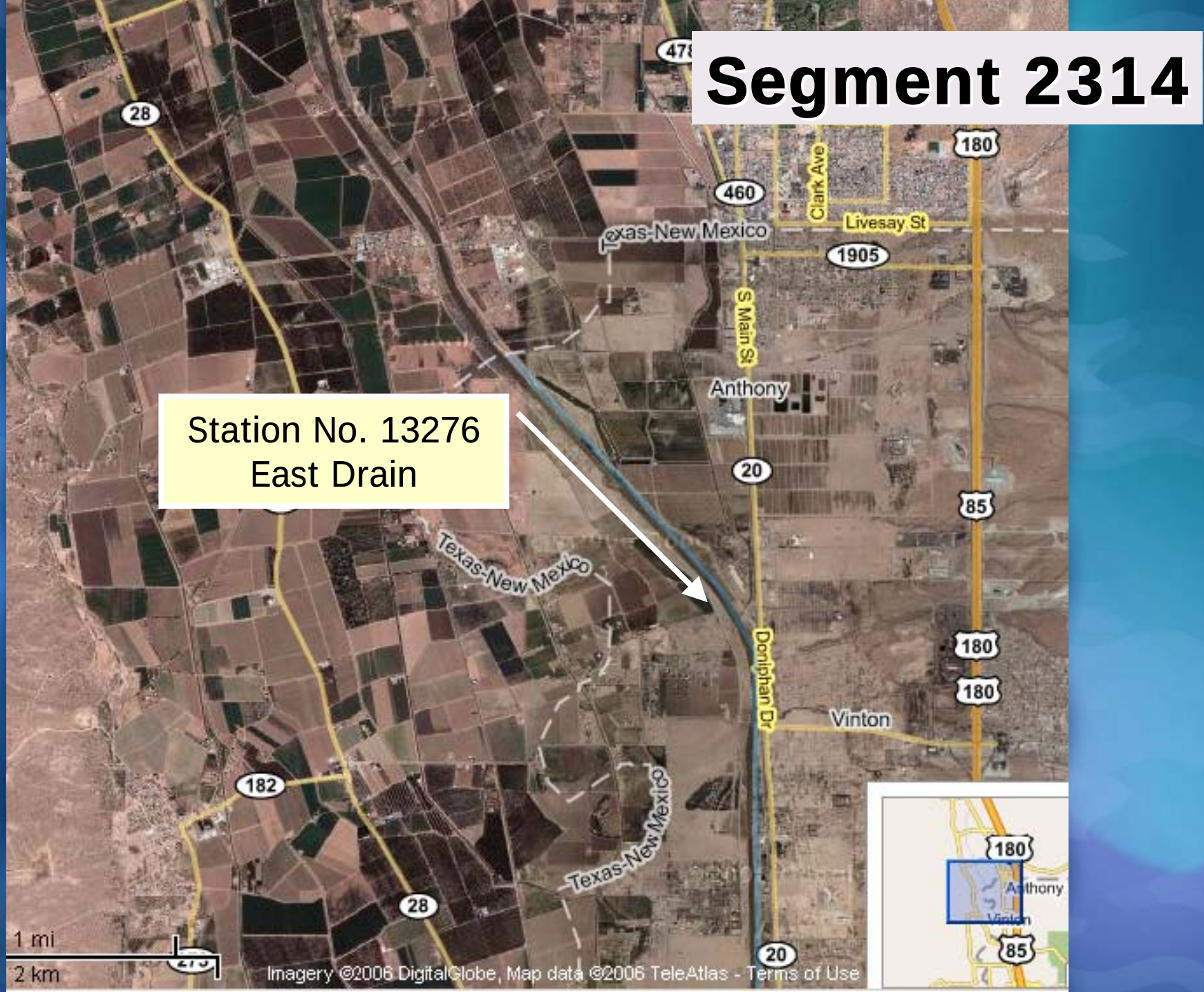



From the NM / TX state line down to the International Dam in El Paso – 21 miles or 33 km
13276
13272
17040
13272
15529
15528
15528
El Paso
Hudspeth
14465
14465
16272
16272
Segment 2314

Designated Uses for Segment 2314

- High aquatic life (DO> = 5 mg/L)
- Public water supply
- Fish consumption
- *Contact recreation*

Concerns: Bacteria


Segment 2314
Station No. 13276
East Drain
28
478
460
180
Clark Ave
Livesay St
1905
Texas-New Mexico
S Main St
Anthony
20
85
Texas-New Mexico
Donlphan Dr
180
180
Vinton
182
Texas-New Mexico
28
20
1 mi
2 km
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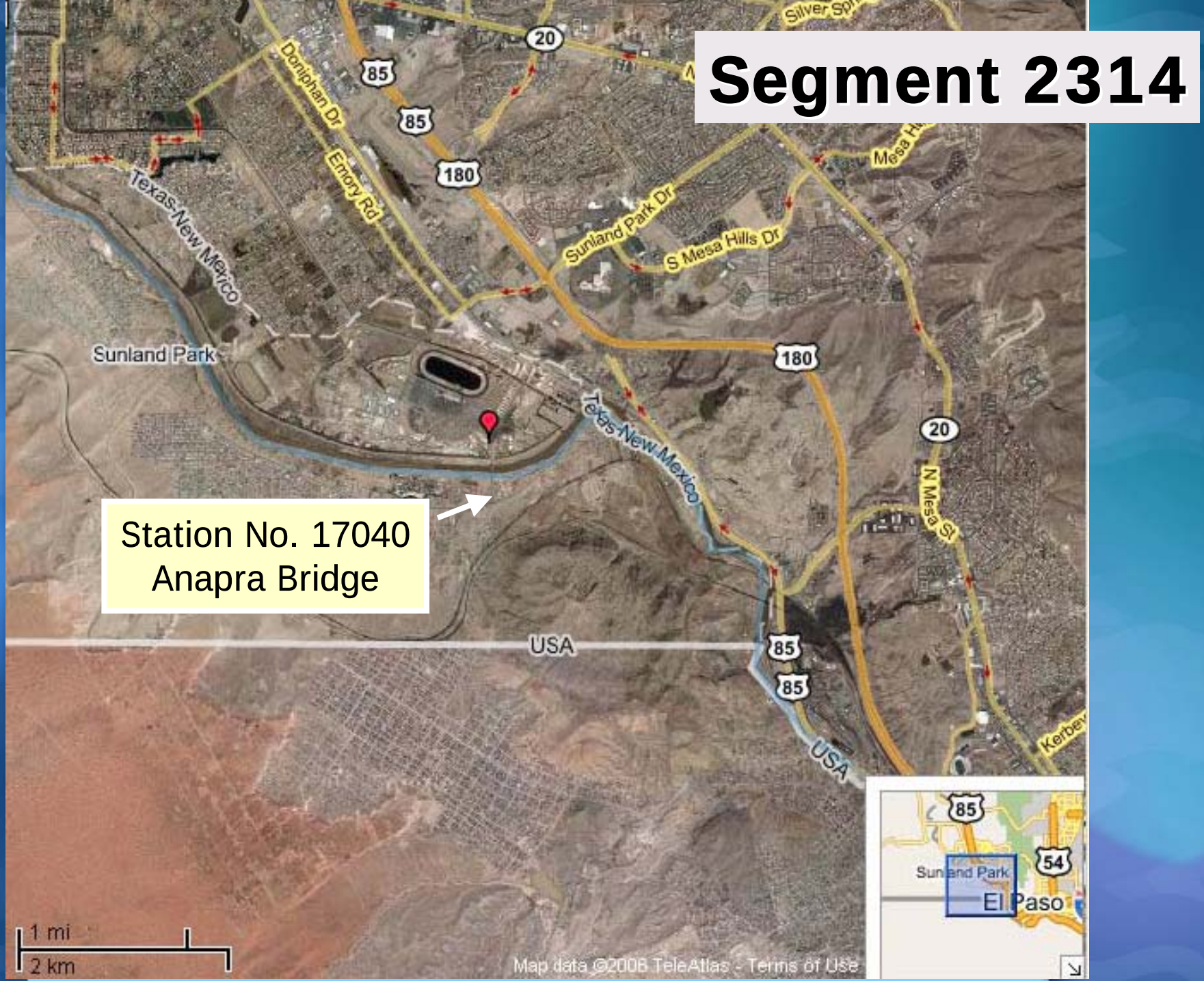
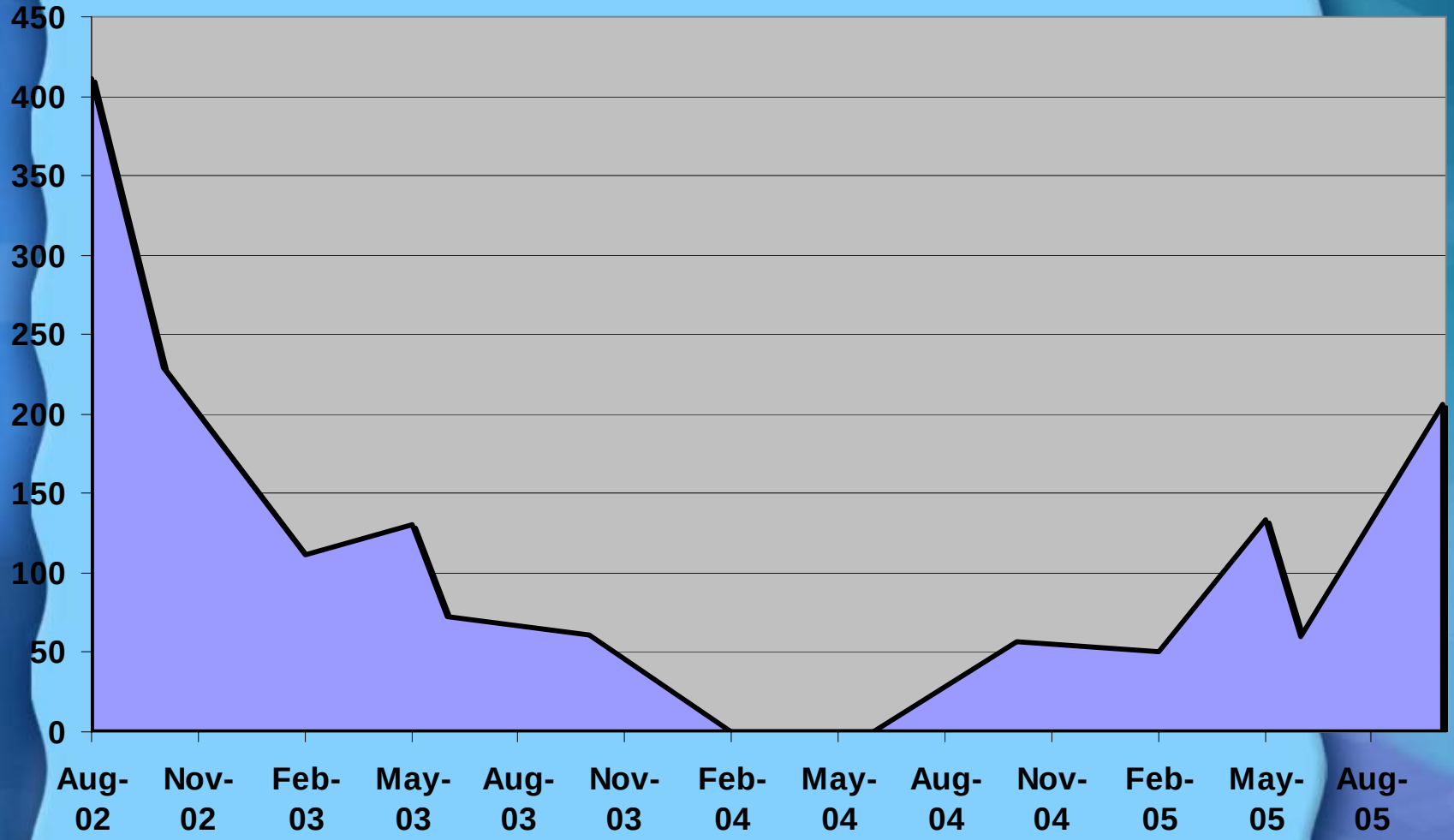
180
85

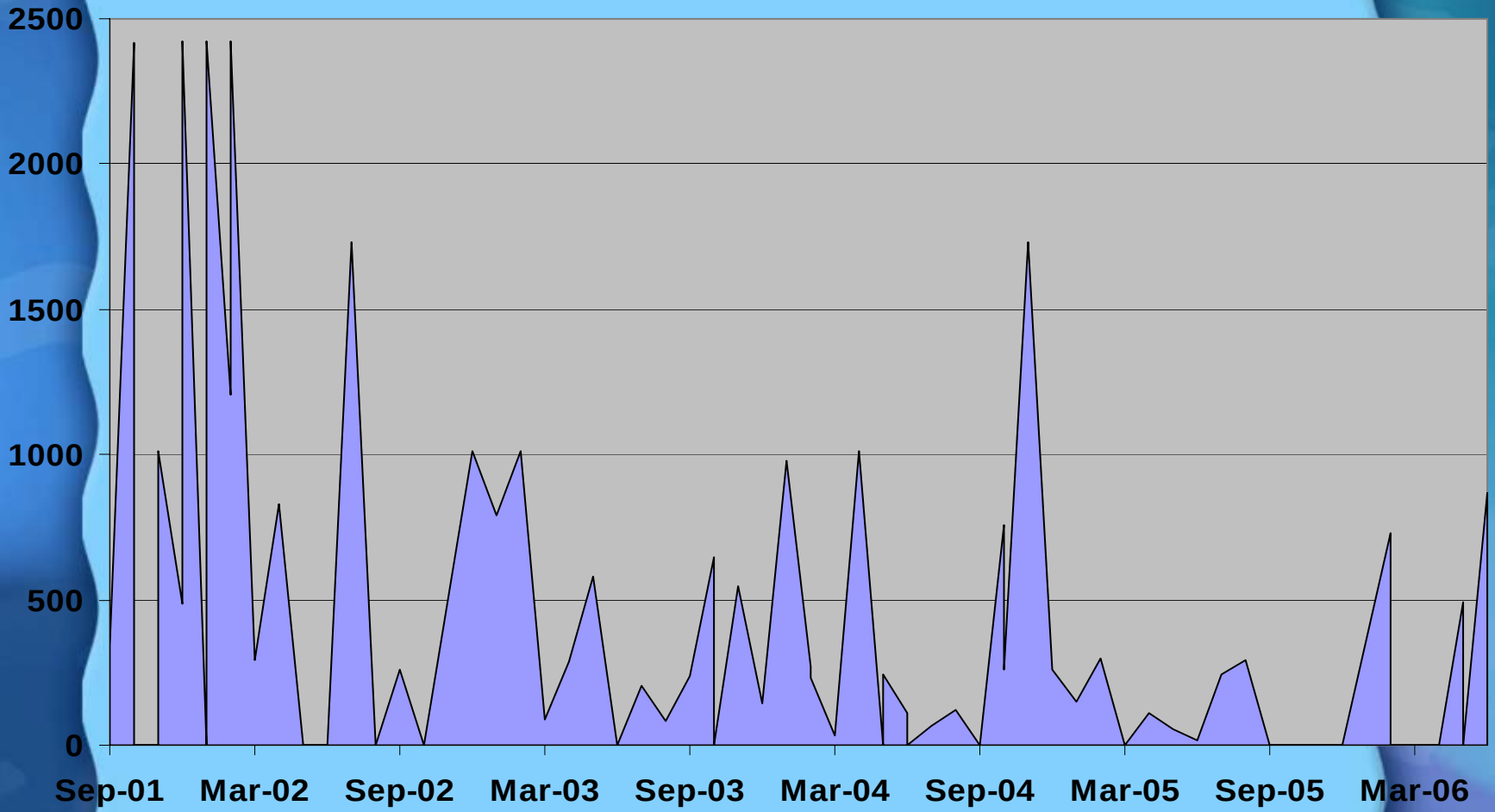

Segment 2314
Station No. 17040
Anapra Bridge
Sunland Park
Texas-New Mexico
Texas-New Mexico
USA
USA
Doniphan Dr
Emory Rd
Sunland Park Dr
S Mesa Hills Dr
N Mesa St
20
85
85
180
180
20
85
85
54
El Paso
1 mi
2 km
Map data ©2008 TeleAtlas - Terms of Use

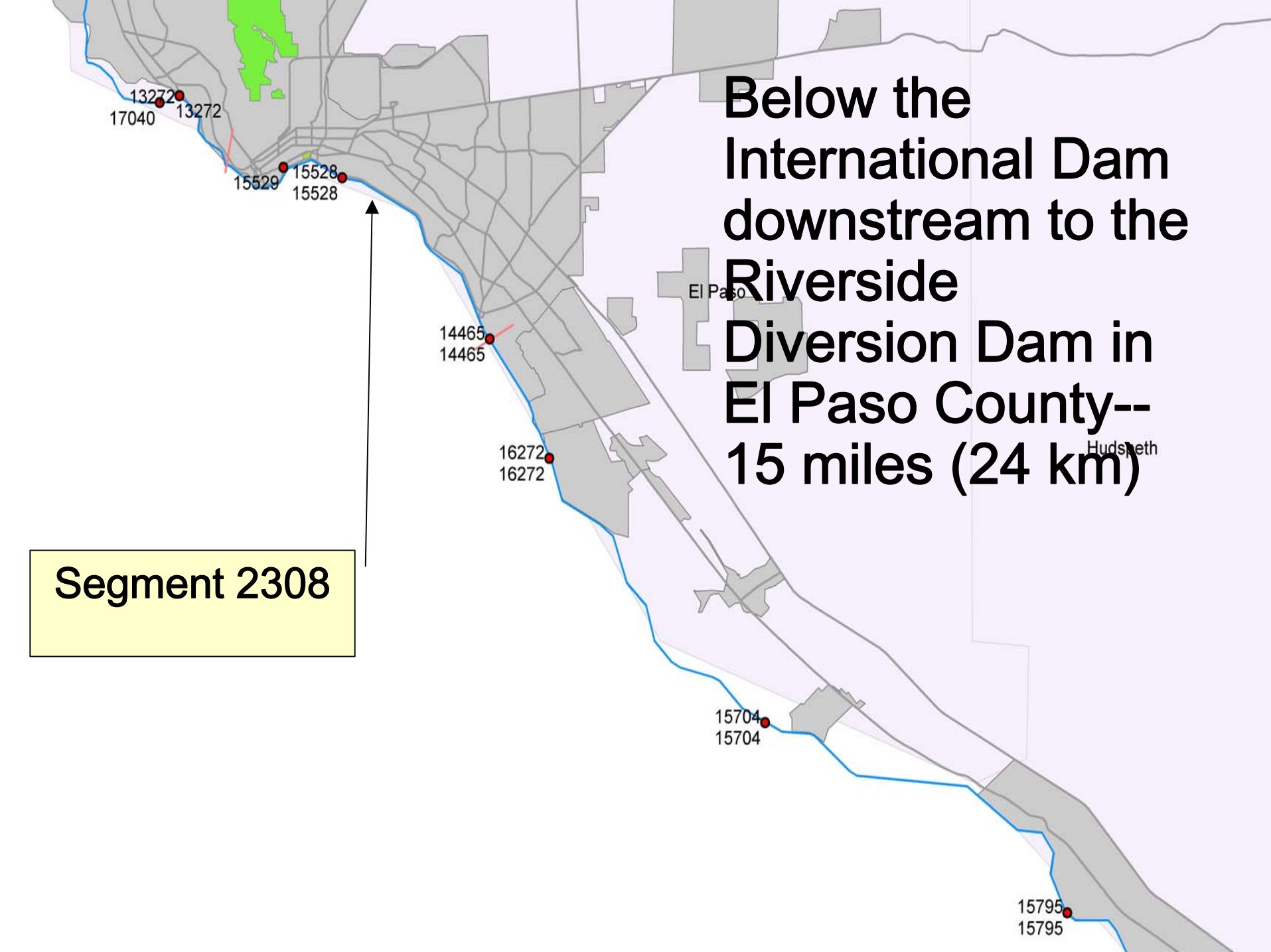

Segment 2314
Station No. 13272
Courchesne Bridge
Donophan Dr
Emory Rd
N Mesa St
Mesa Hills Dr
Sunland Park Dr
S Mesa Hills Dr
Texas-New Mexico
USA
85
180
20
54
Sunland Park
El Paso
1 mi
2 km
Map data ©2006 TeleAtlas - Terms of Use

E. coli readings for Station No. 13276
August 2002-October 2005
Geometric mean = 110 MPN / 100 mL
Standard < = 126 MPN / 100 mL



E. coli readings for Station No. 13272
September 2001-June 2006
Geometric mean = 270 MPN / 100 mL
Standard < = 126 MPN / 100 mL




13272
17040
13272
15529
15528
15528
14465
14465
16272
16272
15704
15704
15795
15795
El Paso
Hudspeth
Below the International Dam downstream to the Riverside Diversion Dam in El Paso County--15 miles (24 km)
Segment 2308

Designated Uses for Segment 2308

- Low aquatic life (DO < 3 mg/L)
- Public water supply
- Fish consumption
- Non-contact recreation

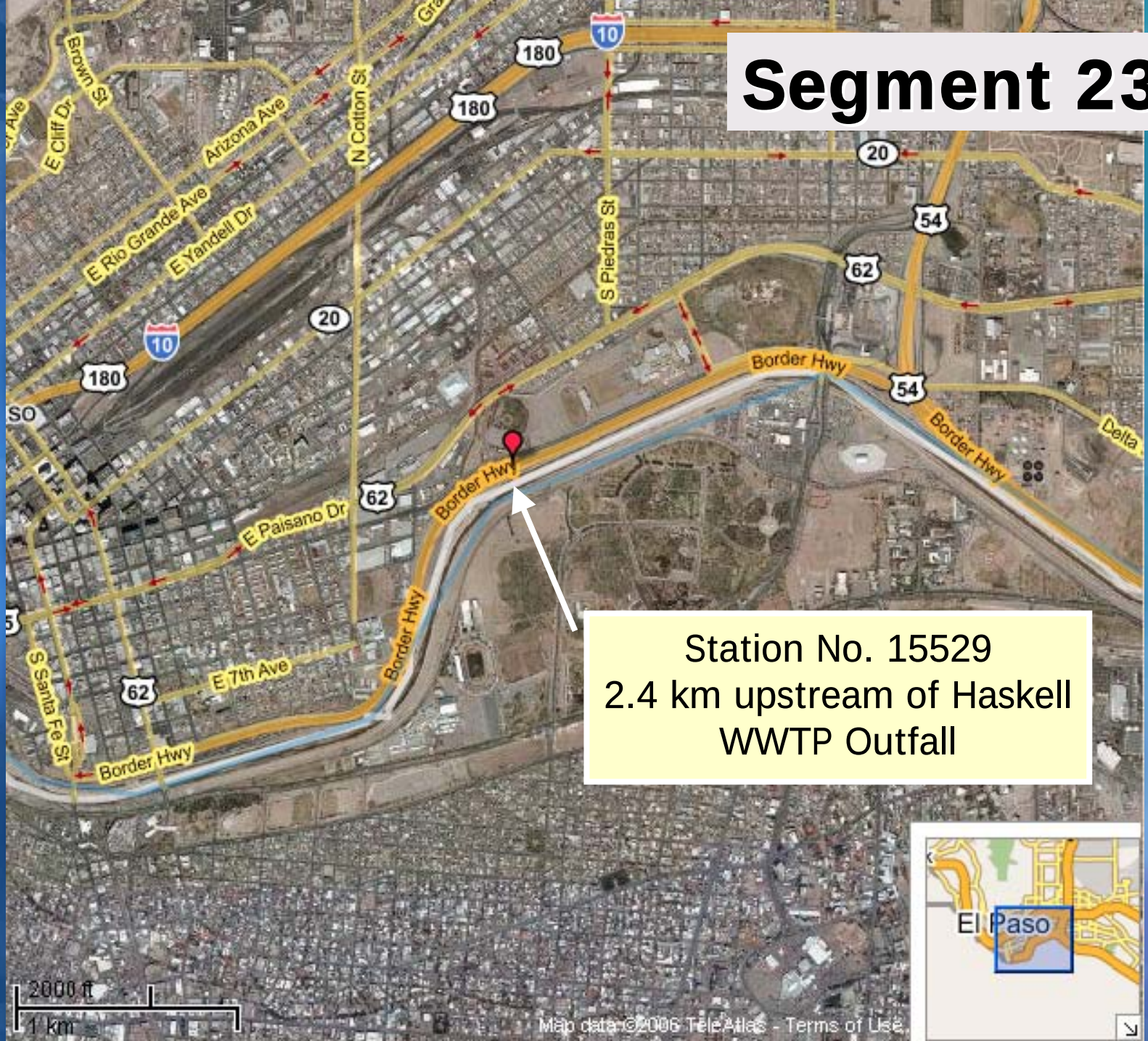
Concerns:

- Phosphorus

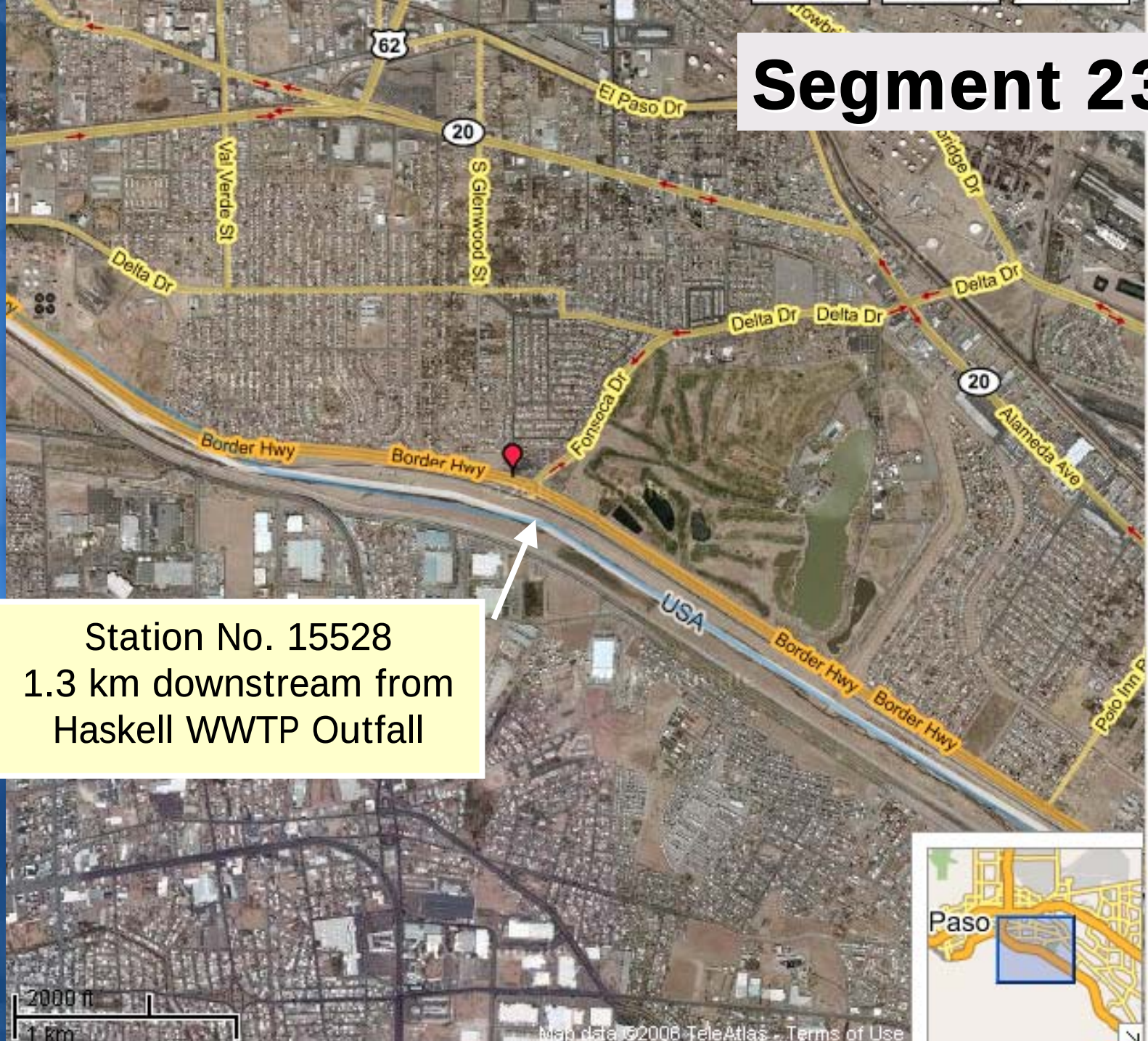
Impacted by:

- Concrete lining
- Lack of water

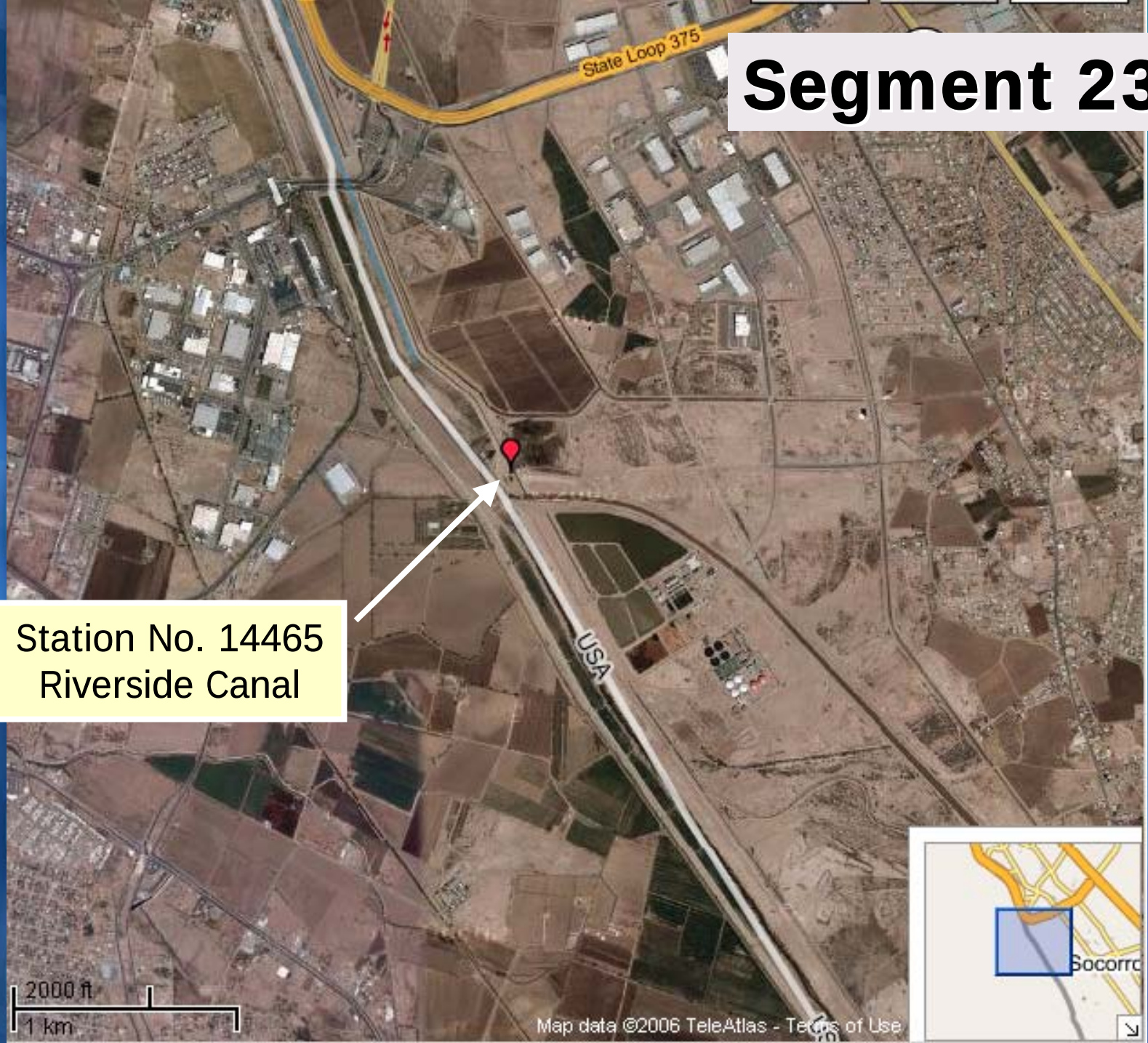
Segment 2308



Segment 2308

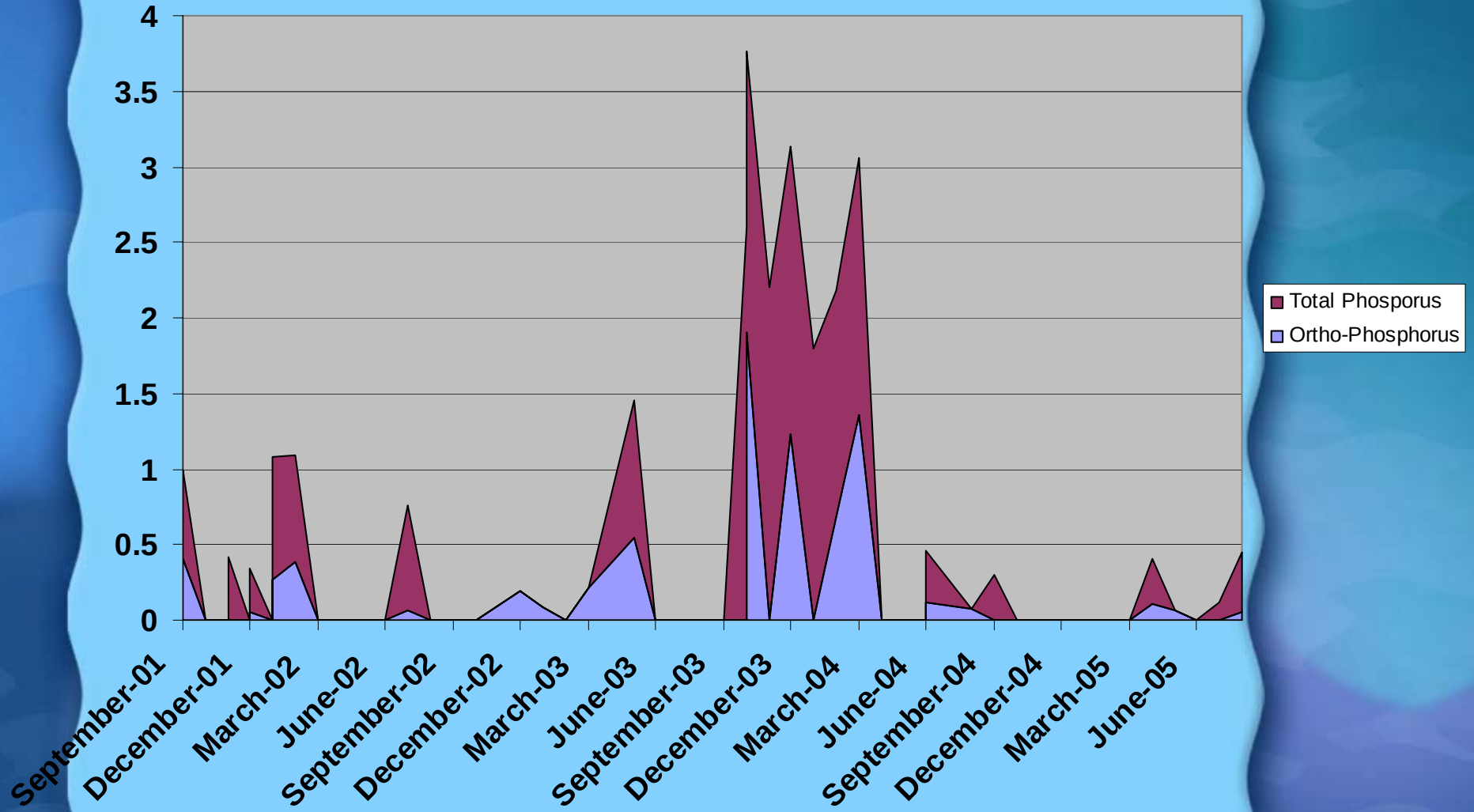


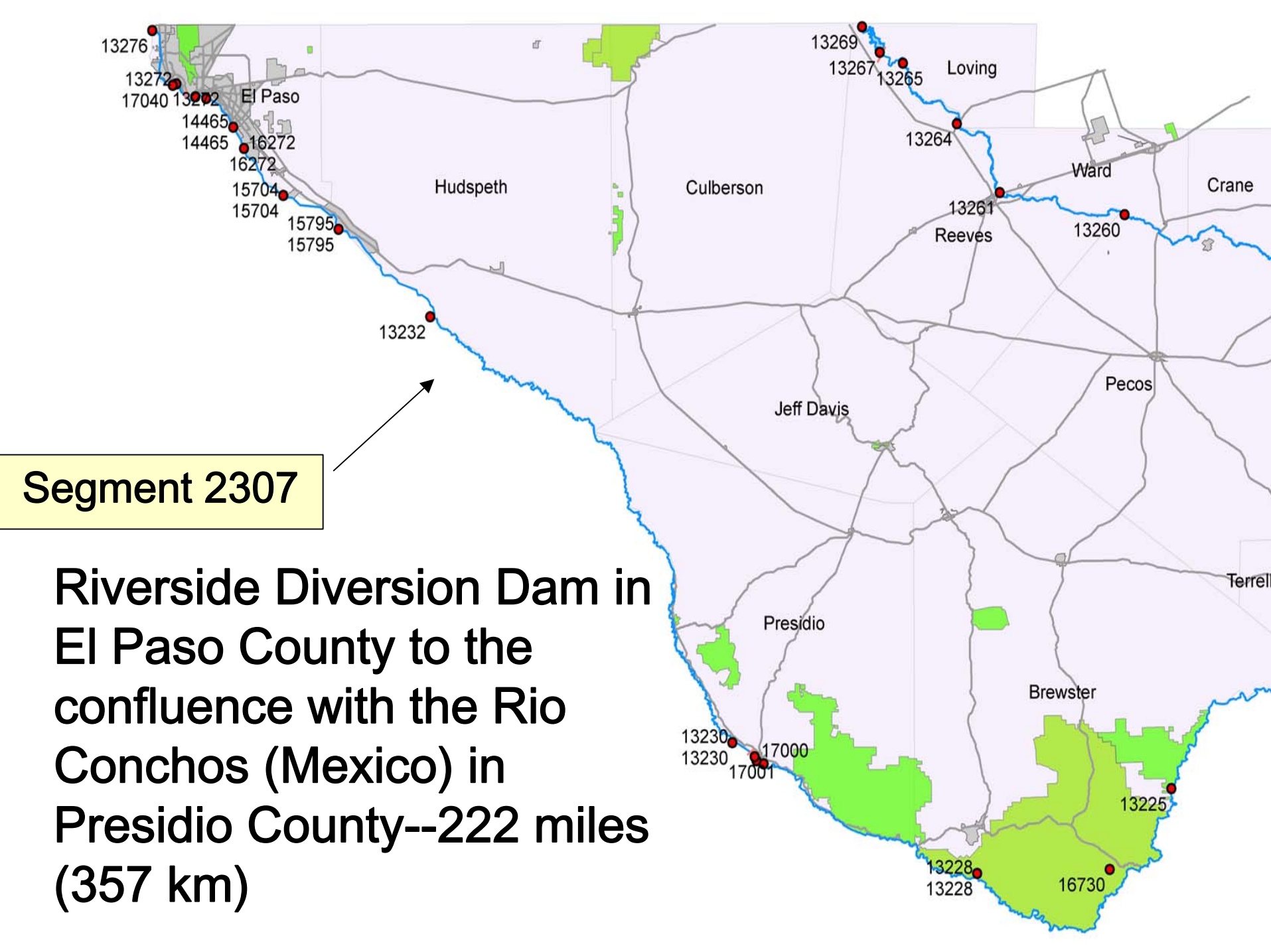
Station No. 15528
1.3 km downstream from
Haskell WWTP Outfall



Segment 2308

Total / Ortho-Phosphorus mg/L for Station No. 15528
September 2001 to August 2005
Average = 1.02 mg/L / 0.4 mg/L





Segment 2307

Riverside Diversion Dam in El Paso County to the confluence with the Rio Conchos (Mexico) in Presidio County--222 miles (357 km)

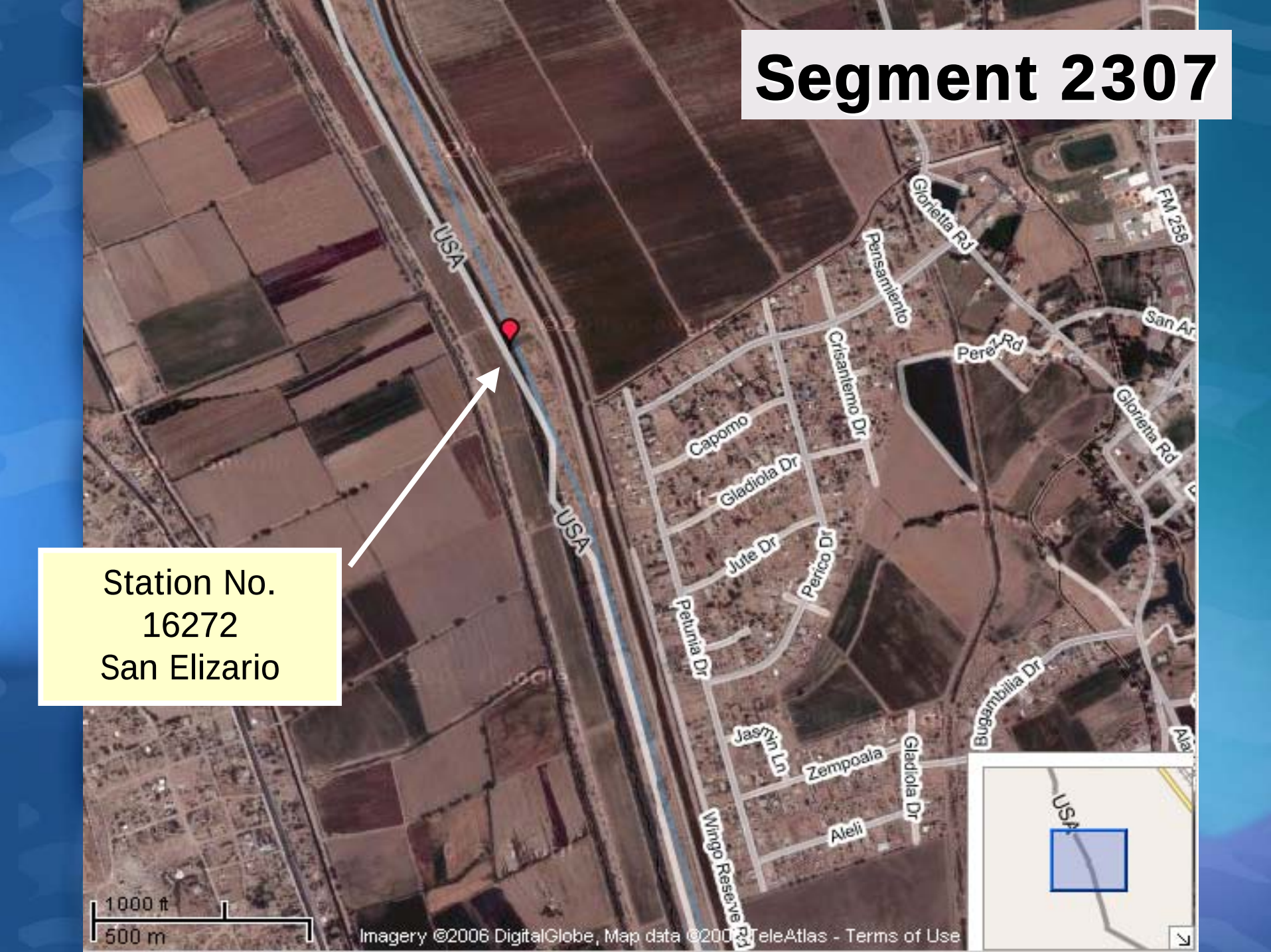
Designated Uses for Segment 2307

- High aquatic life
- Public water supply
- Fish consumption
- Contact recreation

Impacted by:

- Irrigated Agriculture
- Wastewater Treatment Effluent

Impairments: high bacteria, chloride, sulfate, TDS, ammonia, and phosphorus


Segment 2307
Station No.
16272
San Elizario
USA
USA
Gloriella Rd
FM 258
Pensamiento
Crisantemo Dr
Perez Rd
Capomo
Gladiola Dr
Jute Dr
Perico Dr
Petunia Dr
Jasmin Ln
Zempoala
Aleli
Wingo Reserve Rd
Bugambilia Dr
1000 ft
500 m
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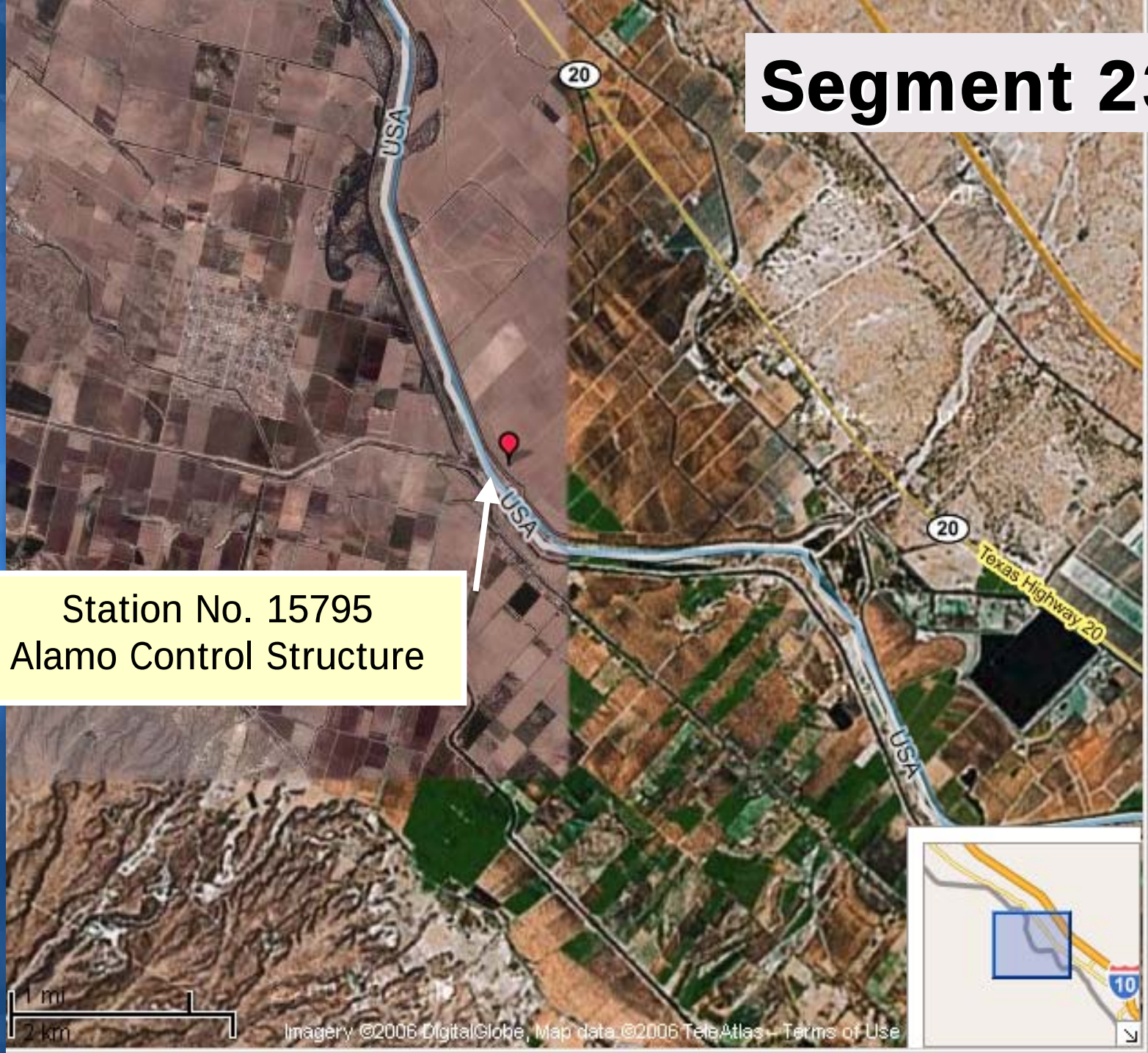
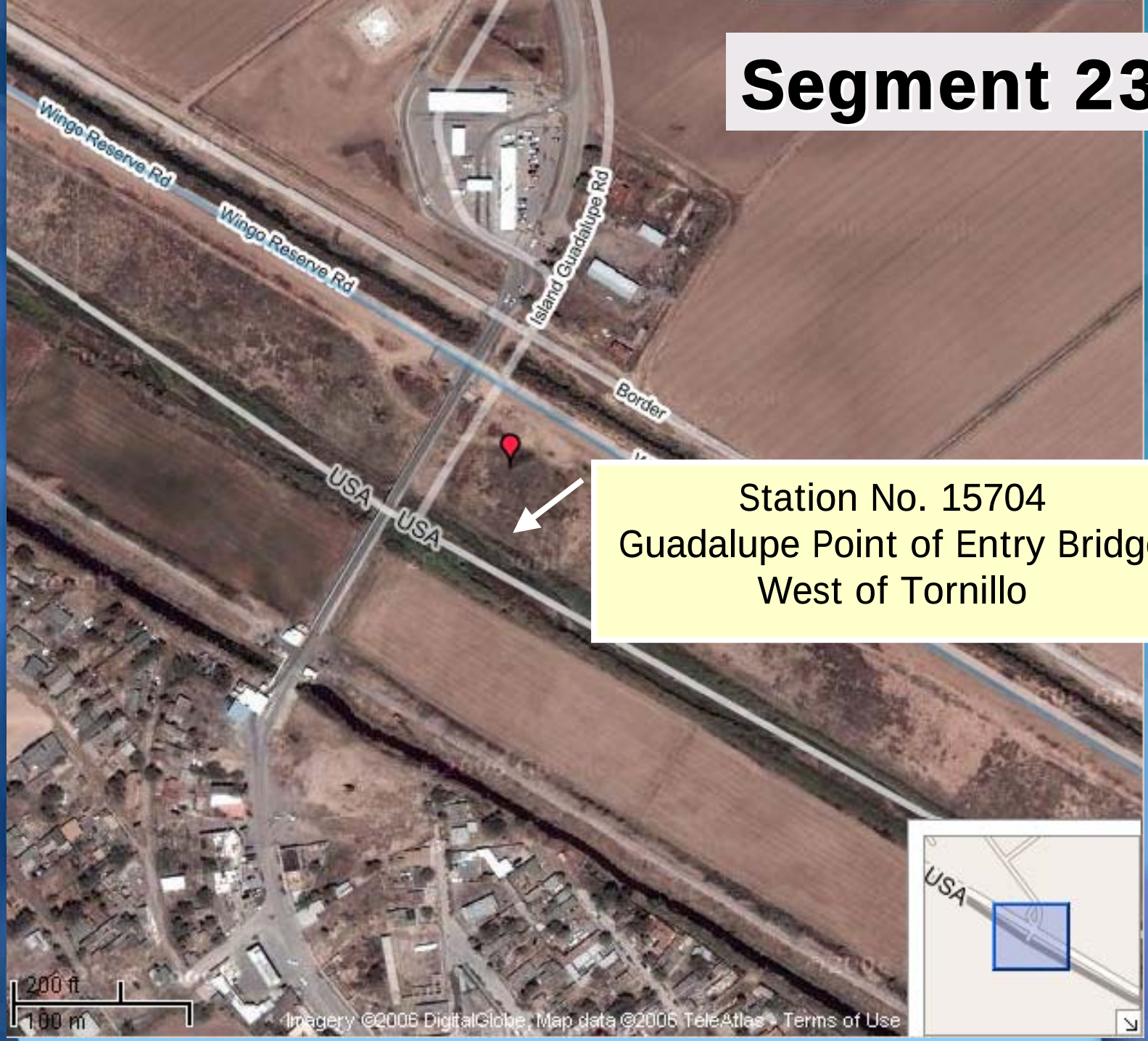
Segment 2307



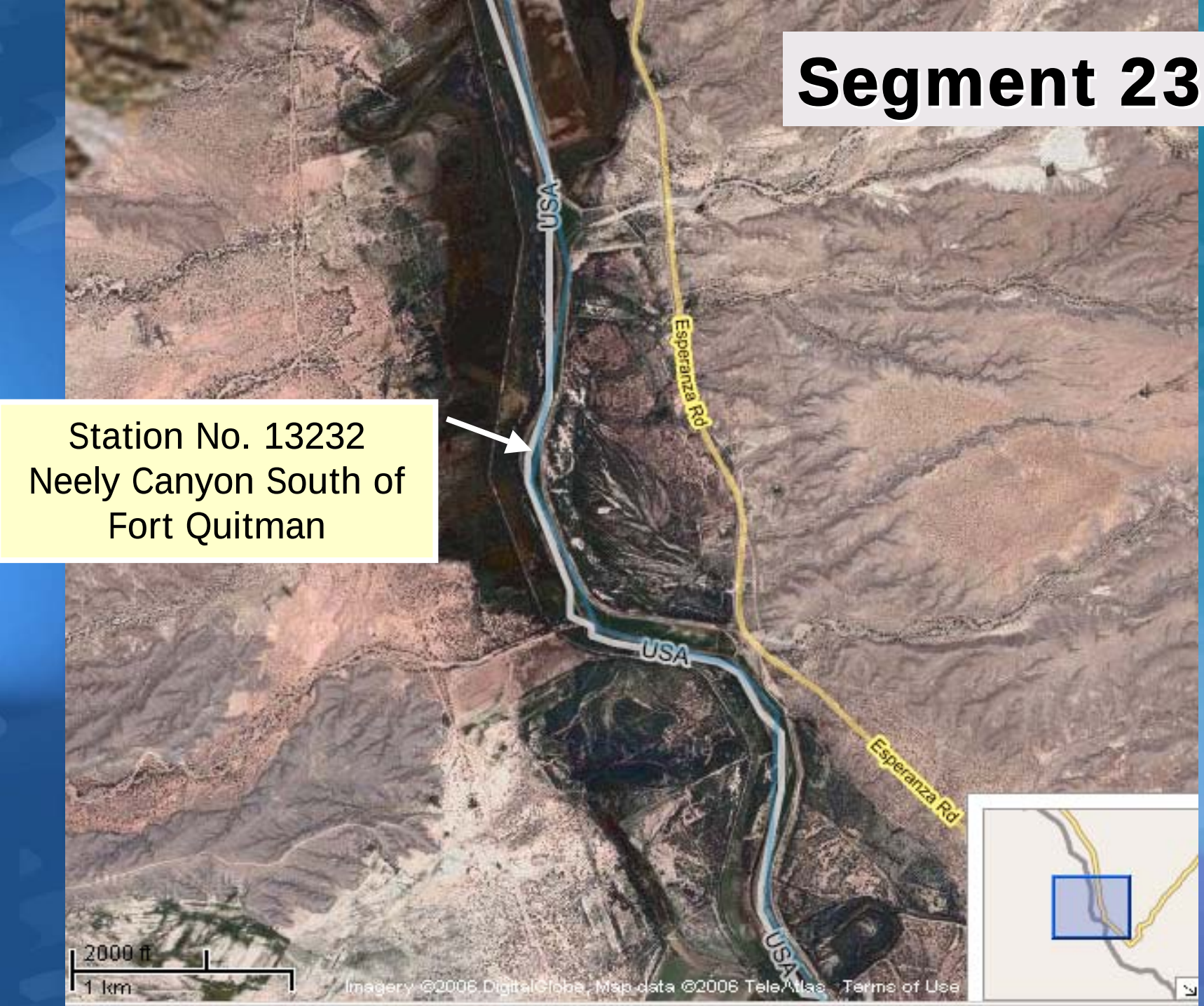
Station No. 15795
Alamo Control Structure

Segment 2307



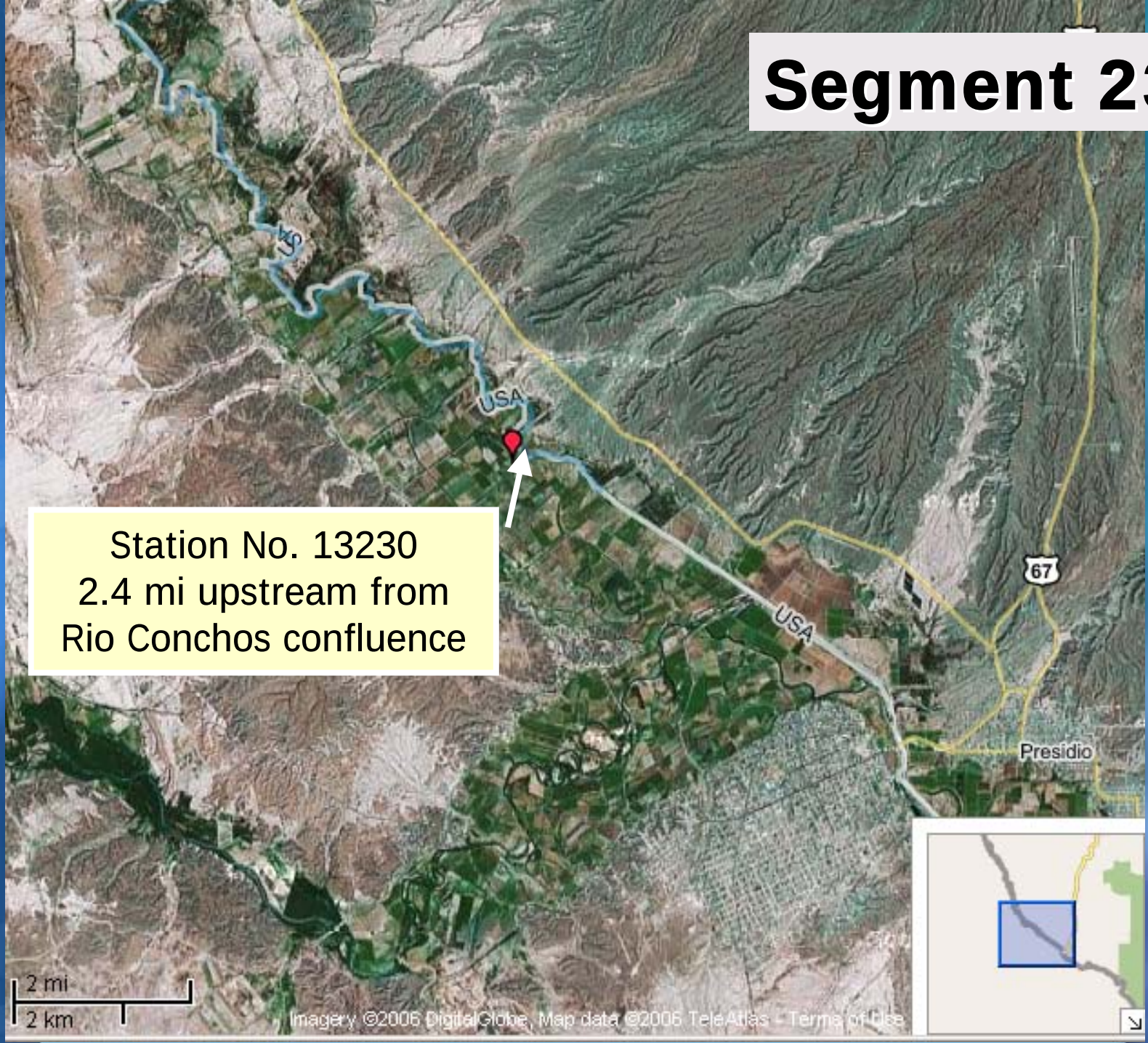
Station No. 15704
Guadalupe Point of Entry Bridge
West of Tornillo

Segment 2307

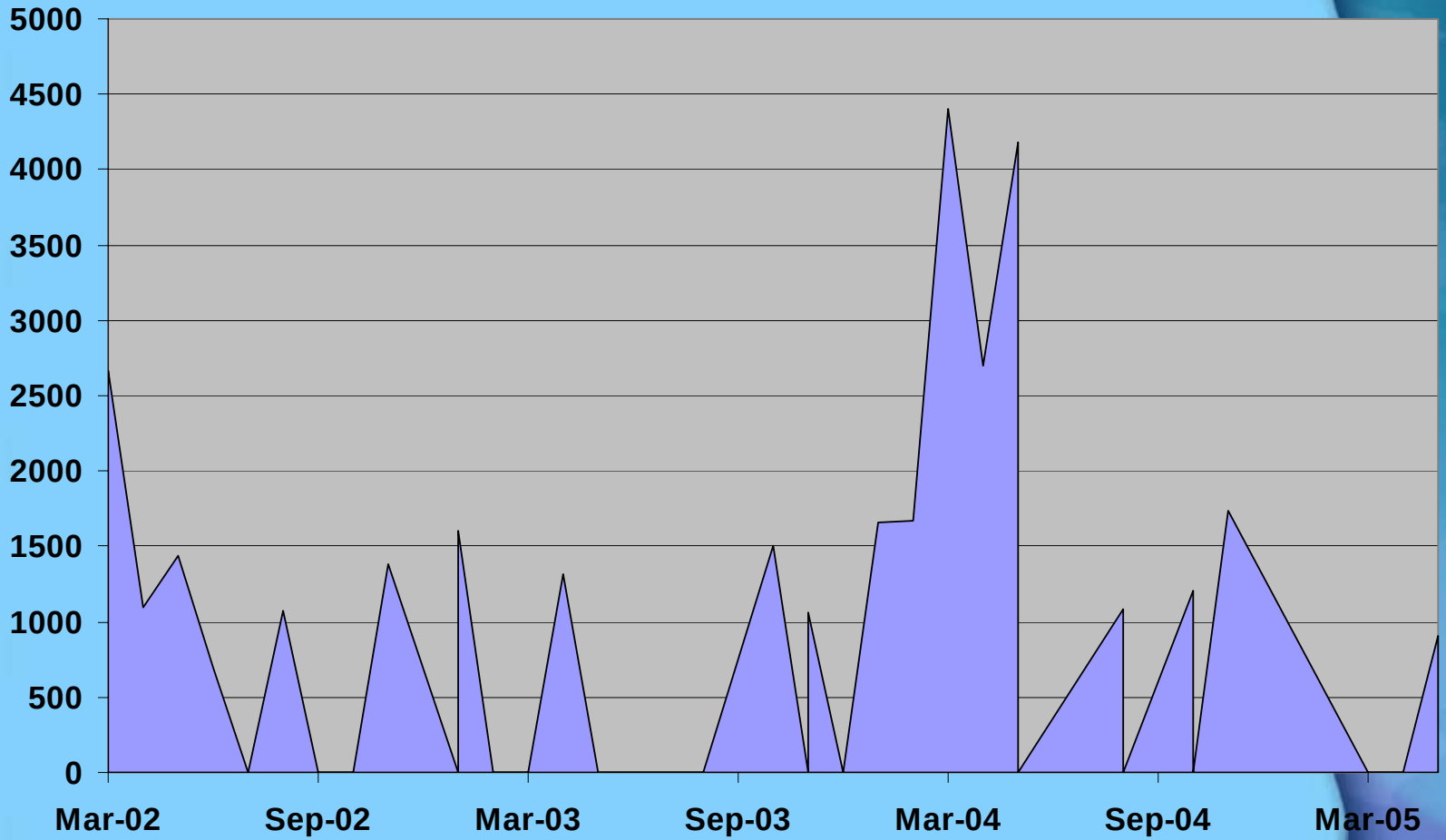


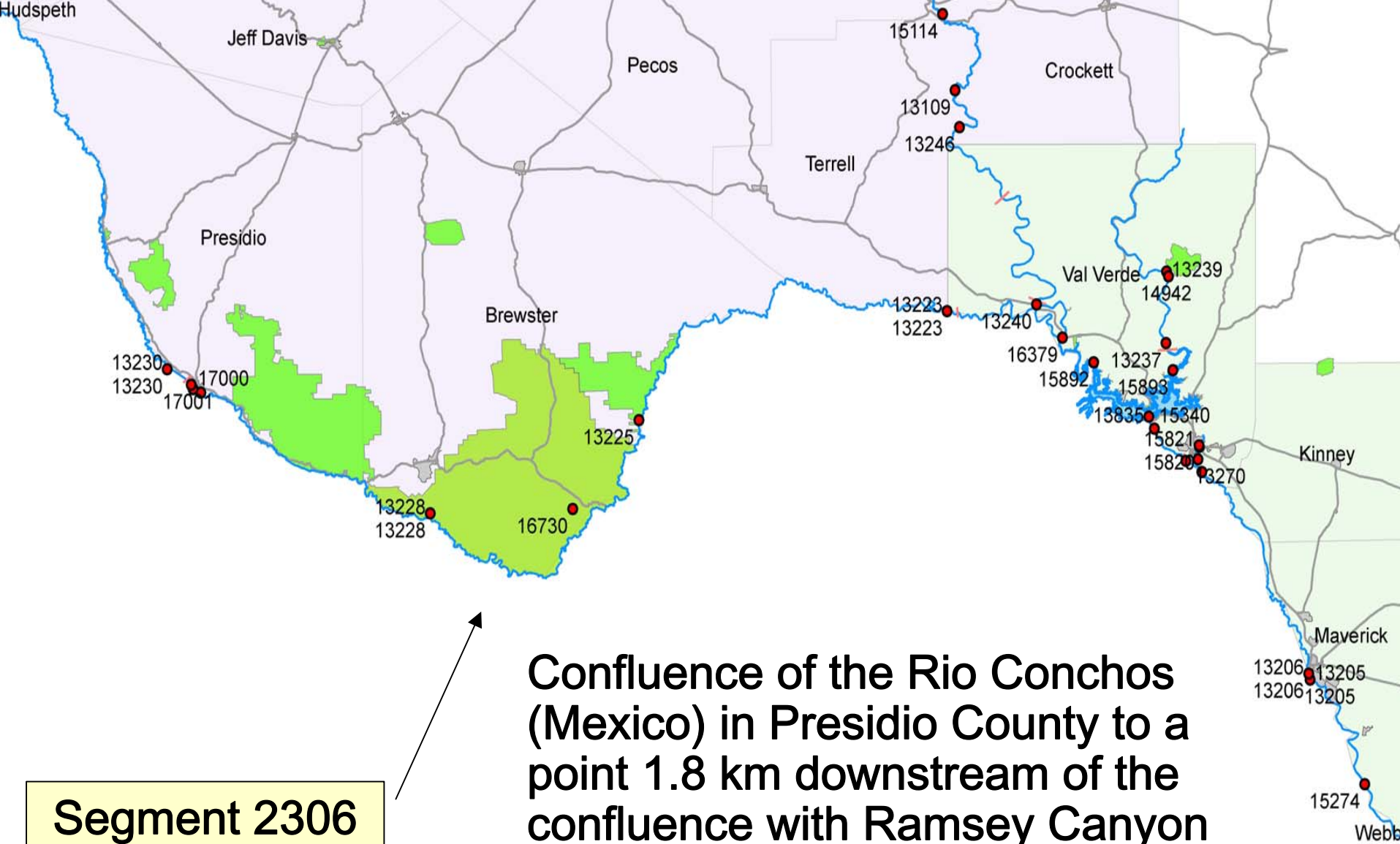
Station No. 13232
Neely Canyon South of
Fort Quitman

Segment 2307



TDS mg/L for Station No. 15795
March 2002 to May 2005
Average = 1754
Standard = 1500





Segment 2306

Confluence of the Rio Conchos (Mexico) in Presidio County to a point 1.8 km downstream of the confluence with Ramsey Canyon in Val Verde County—313 miles (503 km)

Designated Uses for Segment 2306

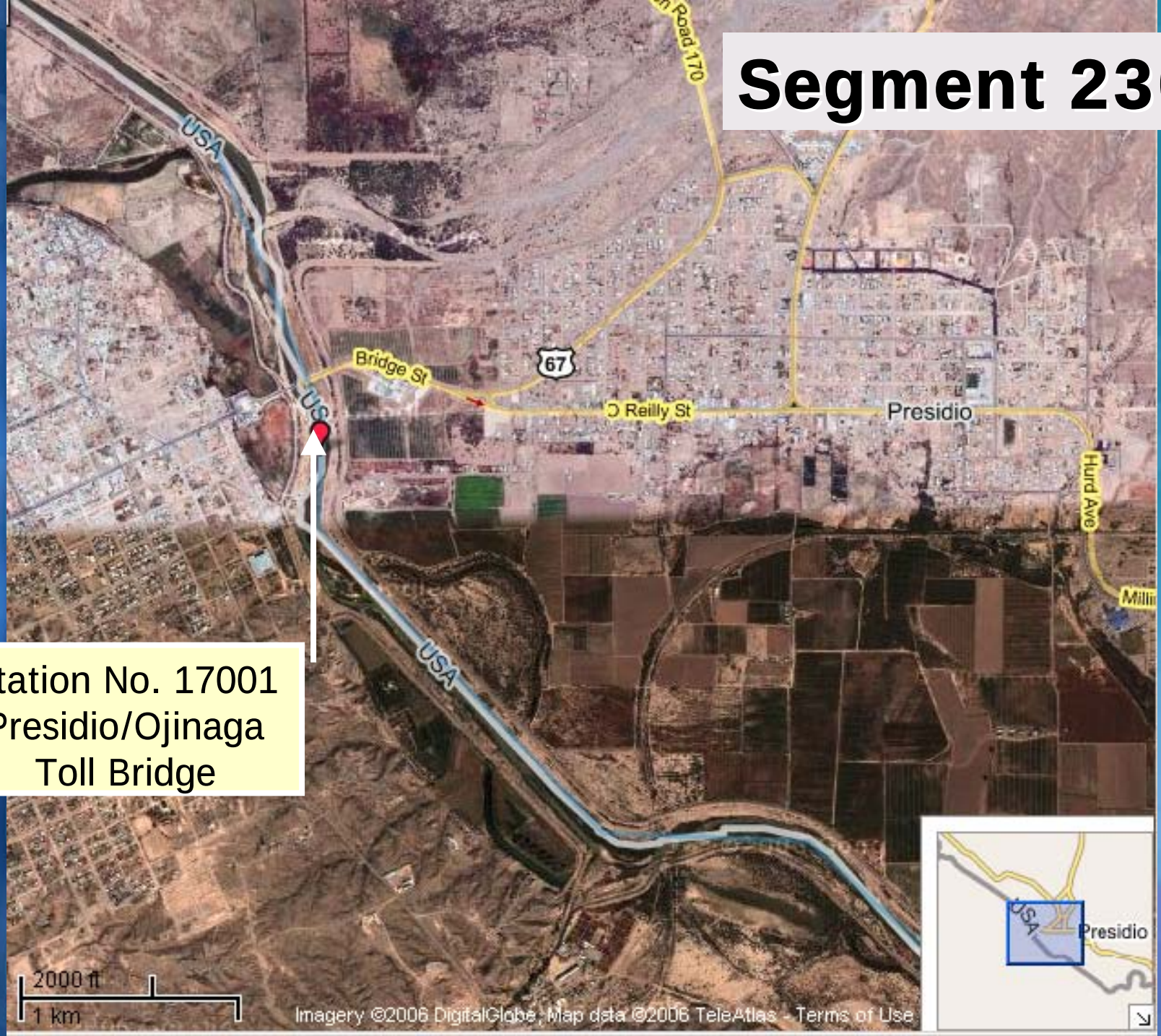
- *Aquatic life*
- Public water supply
- Fish consumption
- *Contact recreation*

Impacted by:
- Presidio, TX
- Ojinaga, Chih

Impairments: bacteria, chronic toxicity in water to aquatic organisms (salinity)

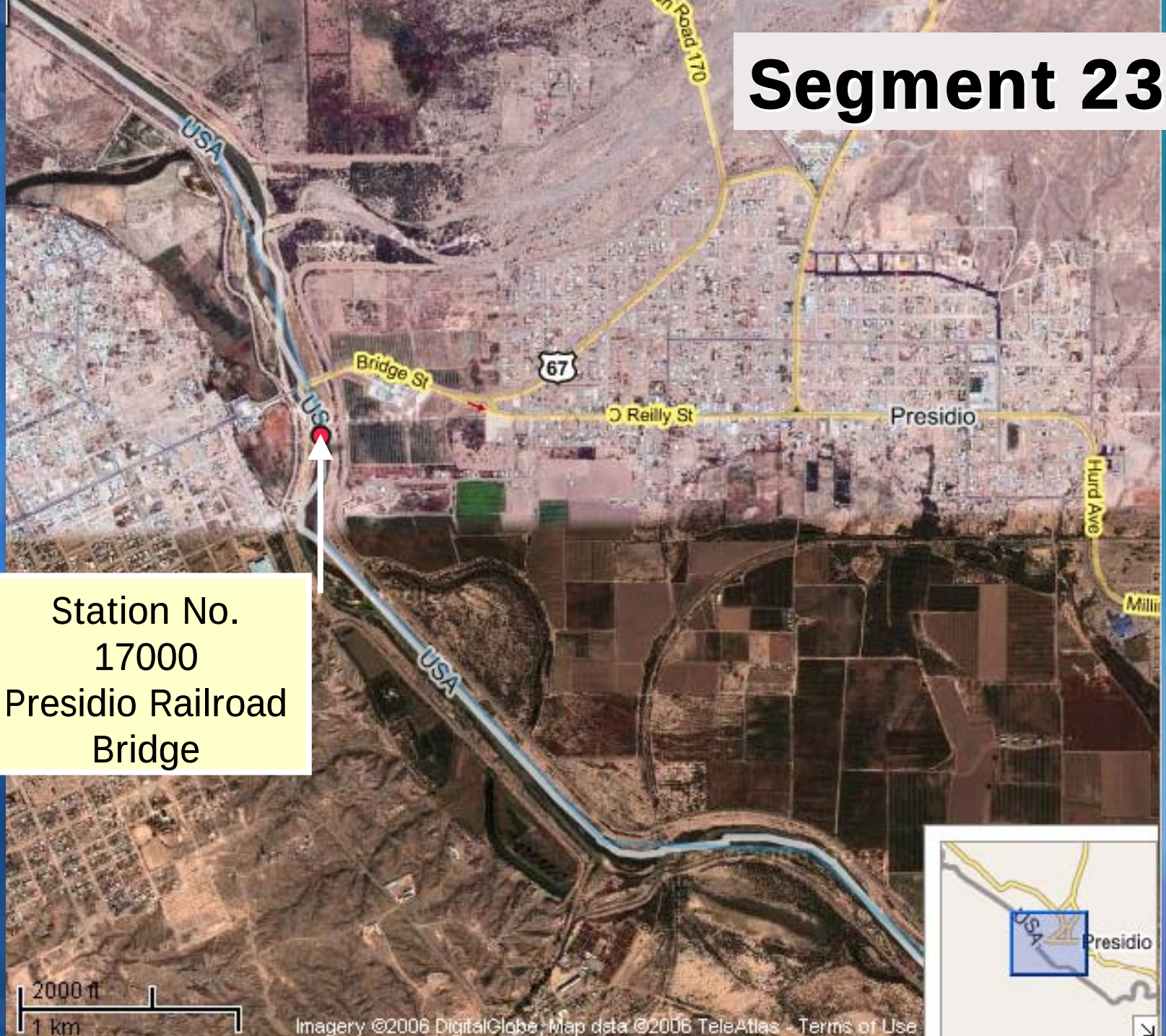
Concerns: TDS, algae blooms, sulfate

Segment 2306



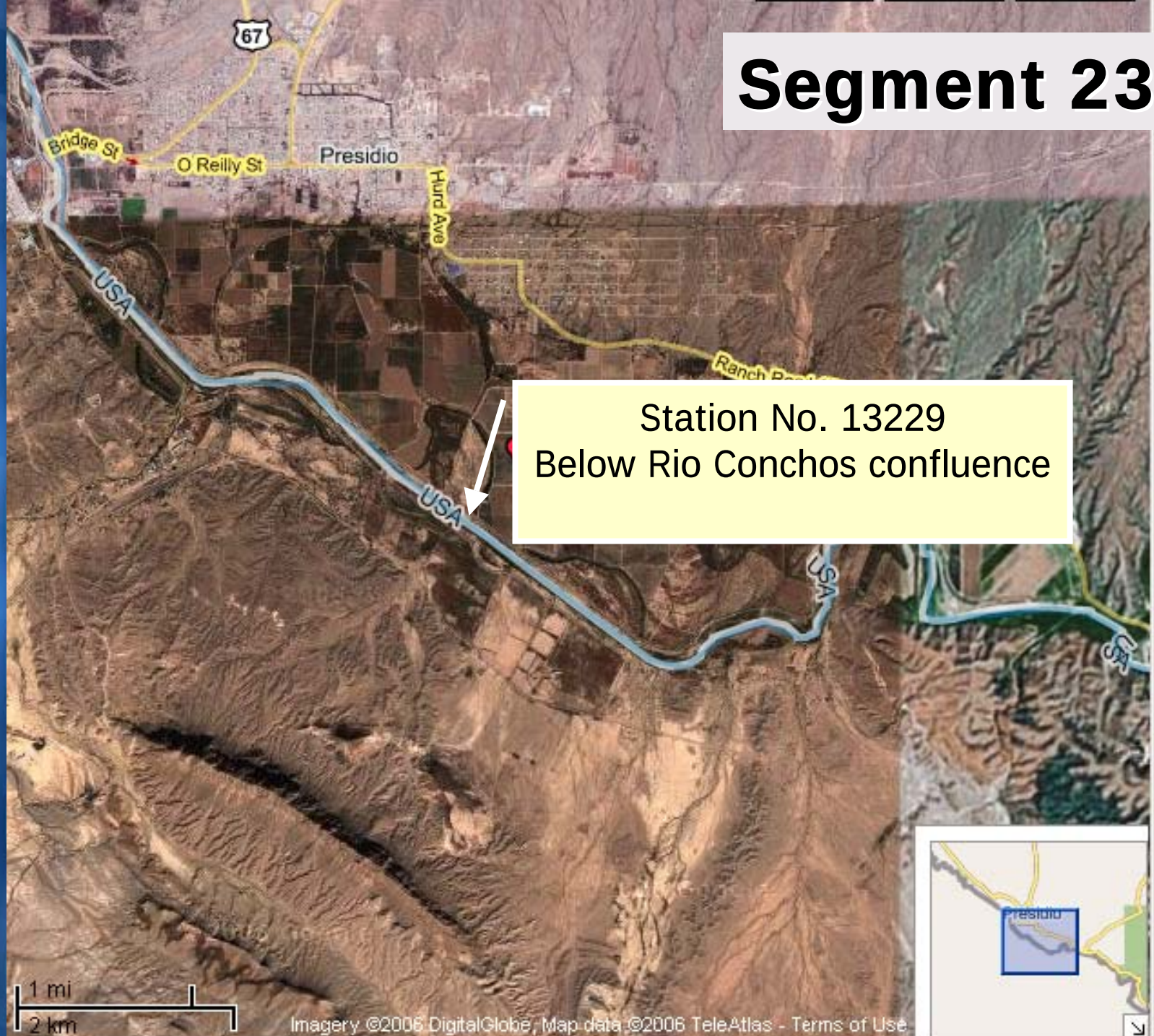
Station No. 17001
Presidio/Ojinaga
Toll Bridge

Segment 2306

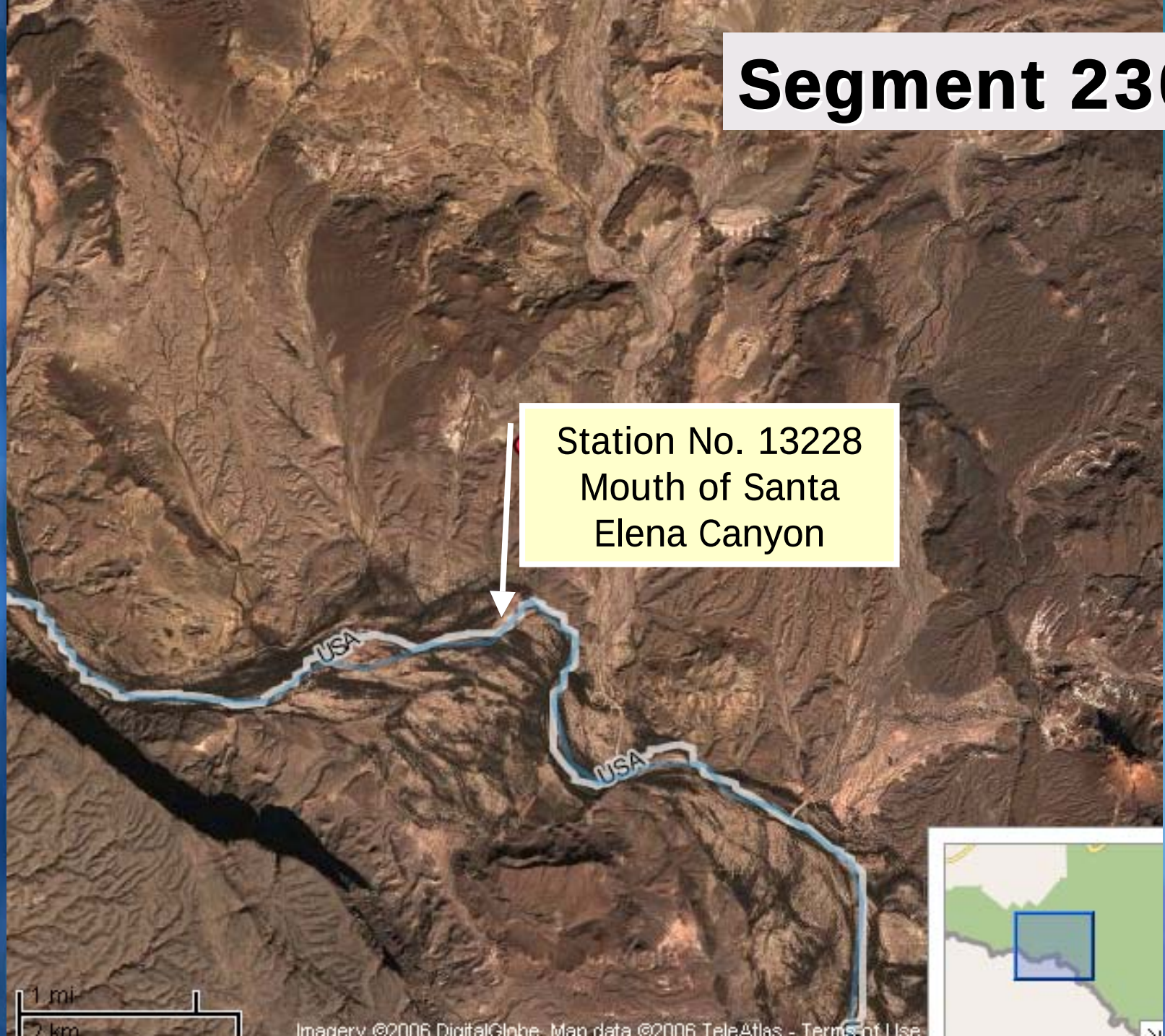


Station No.
17000
Presidio Railroad
Bridge

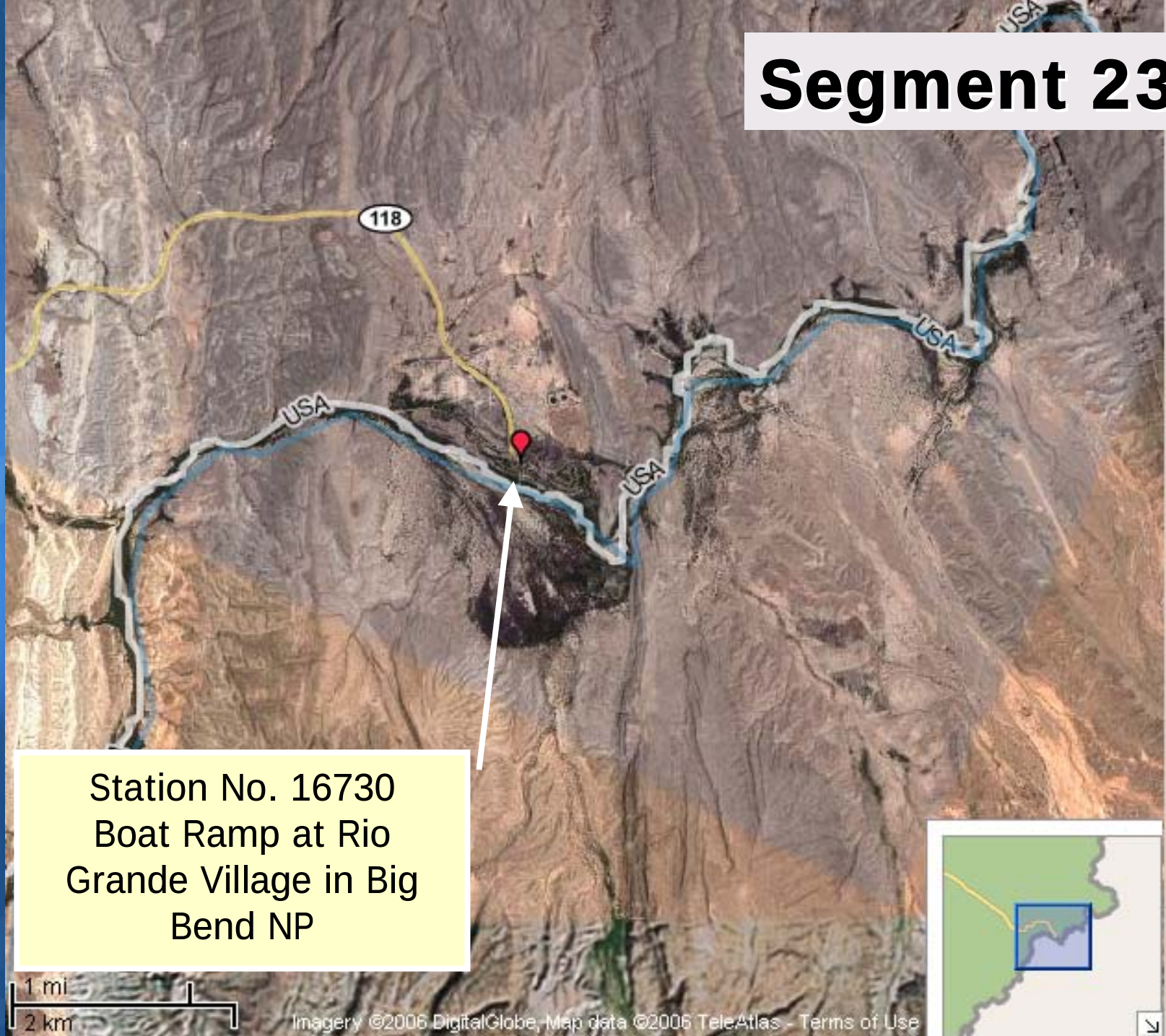
Segment 2306



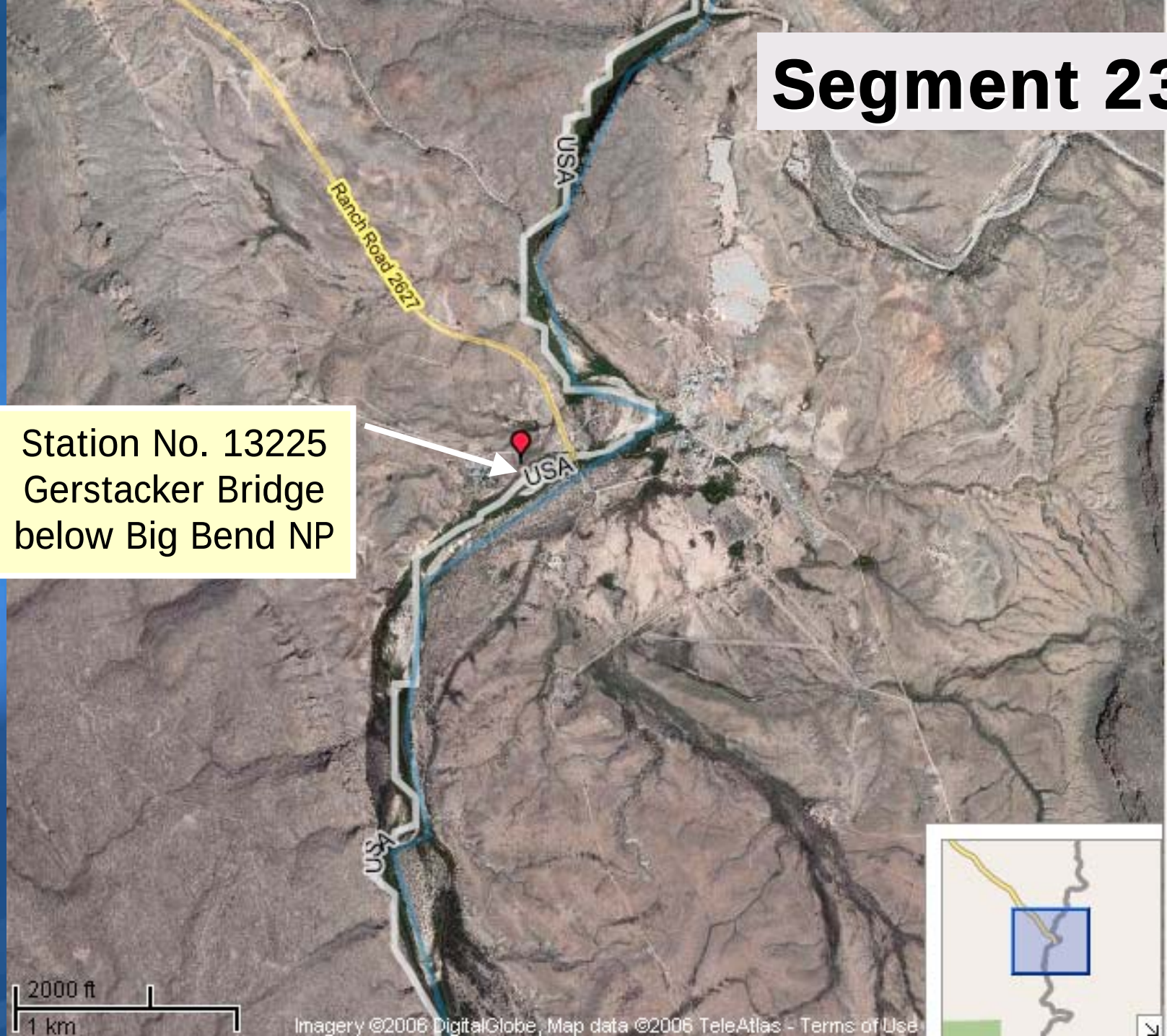
Segment 2306



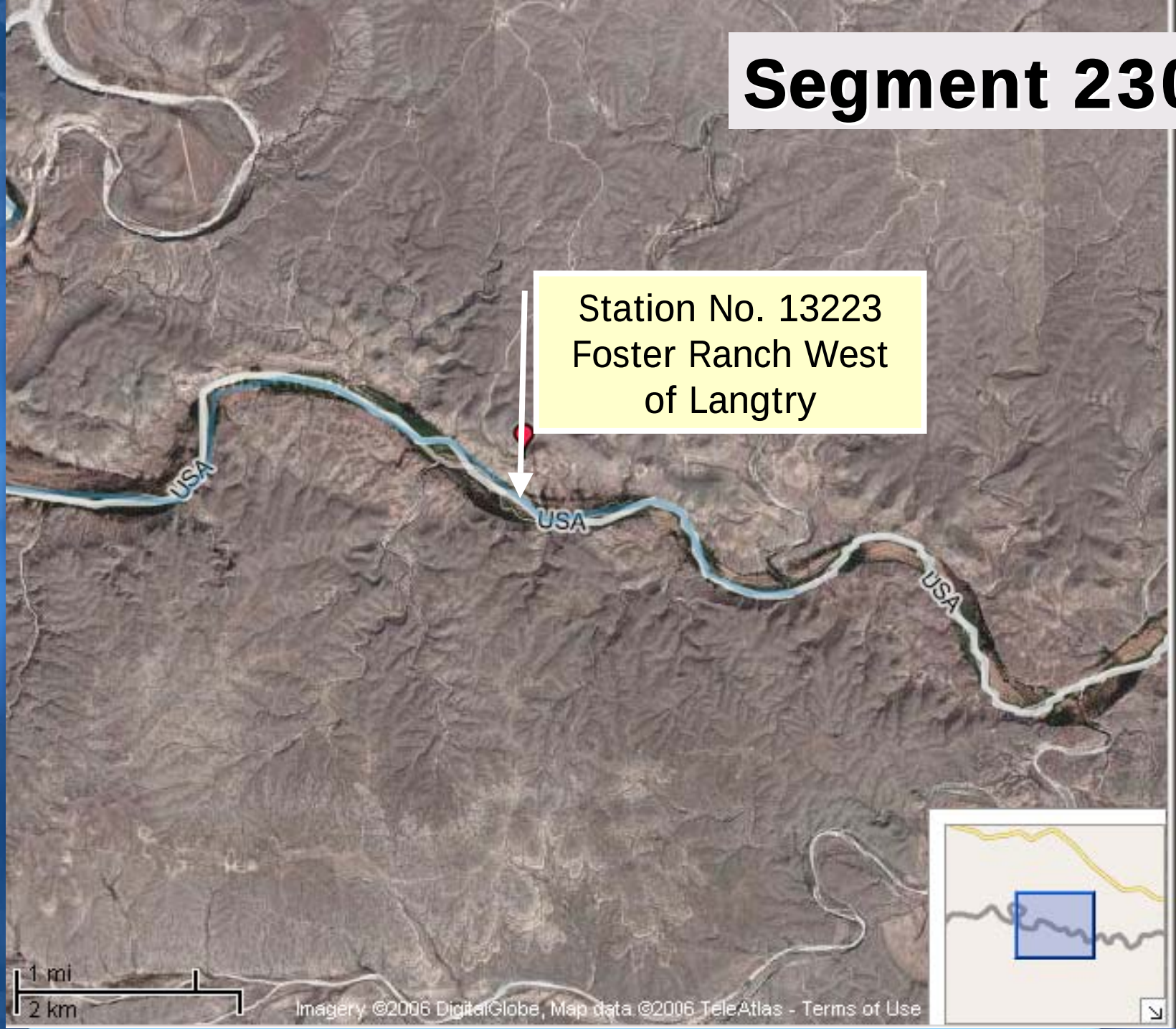
Segment 2306



Segment 2306



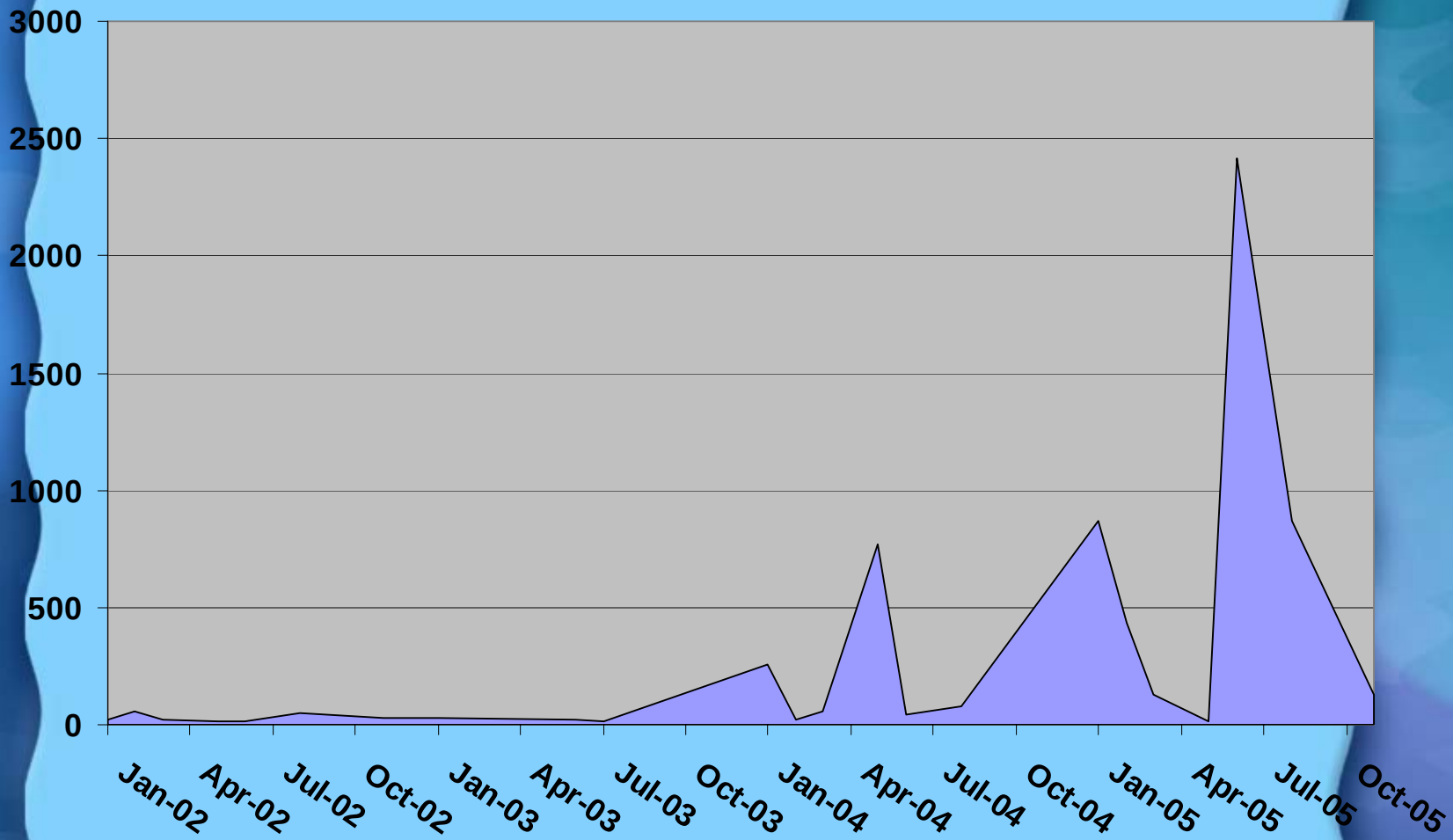
Segment 2306



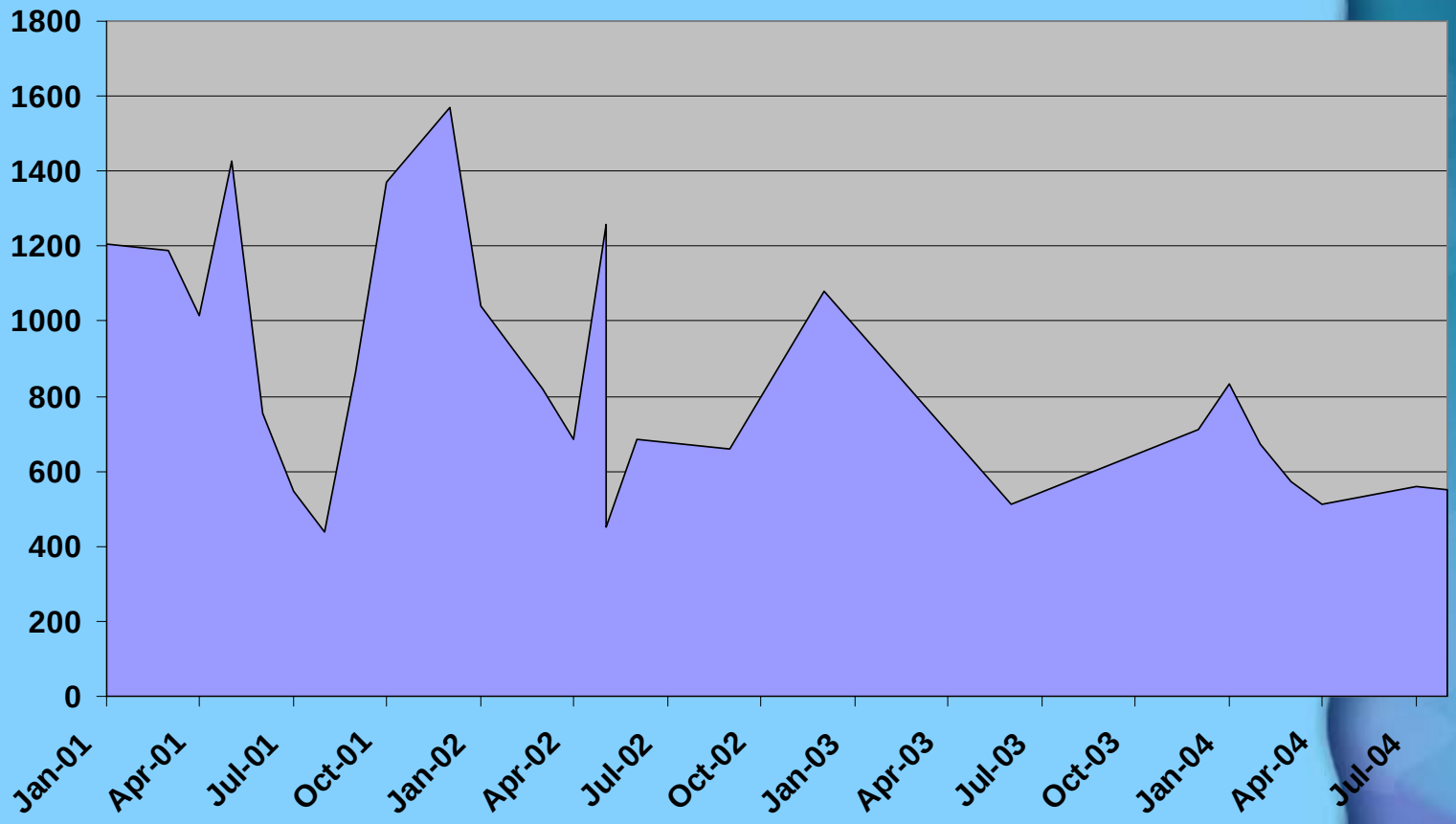
E. coli readings for Station No. 17001 January 2002-November 2005

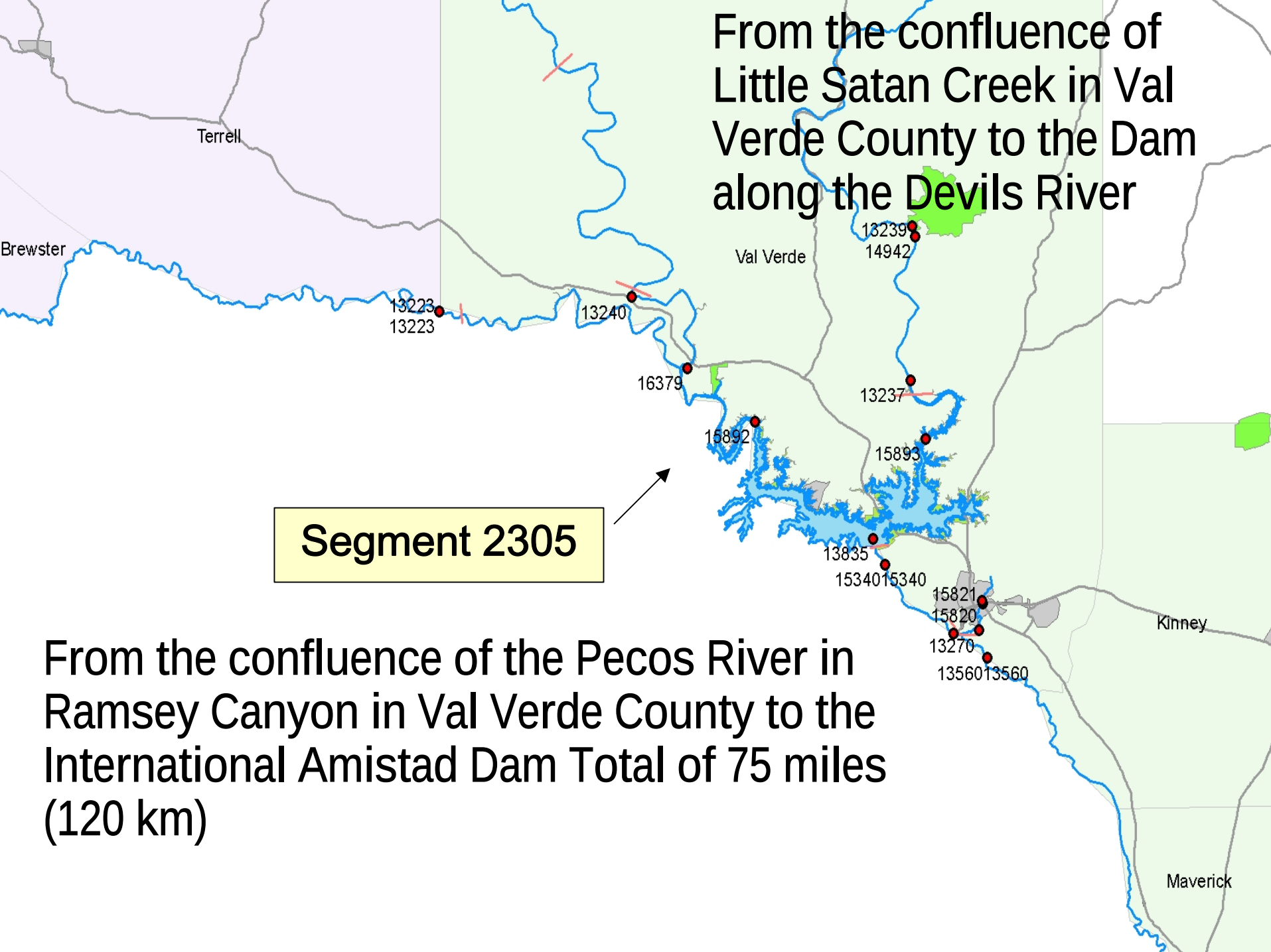
Geometric mean = 72 MPN / 100 mL

Standard < = 126 MPN / 100 mL



TDS mg/L for Station No. 13223
January 2001 to August 2004
Average = 845 mg/L
Standard = 1500 mg/L



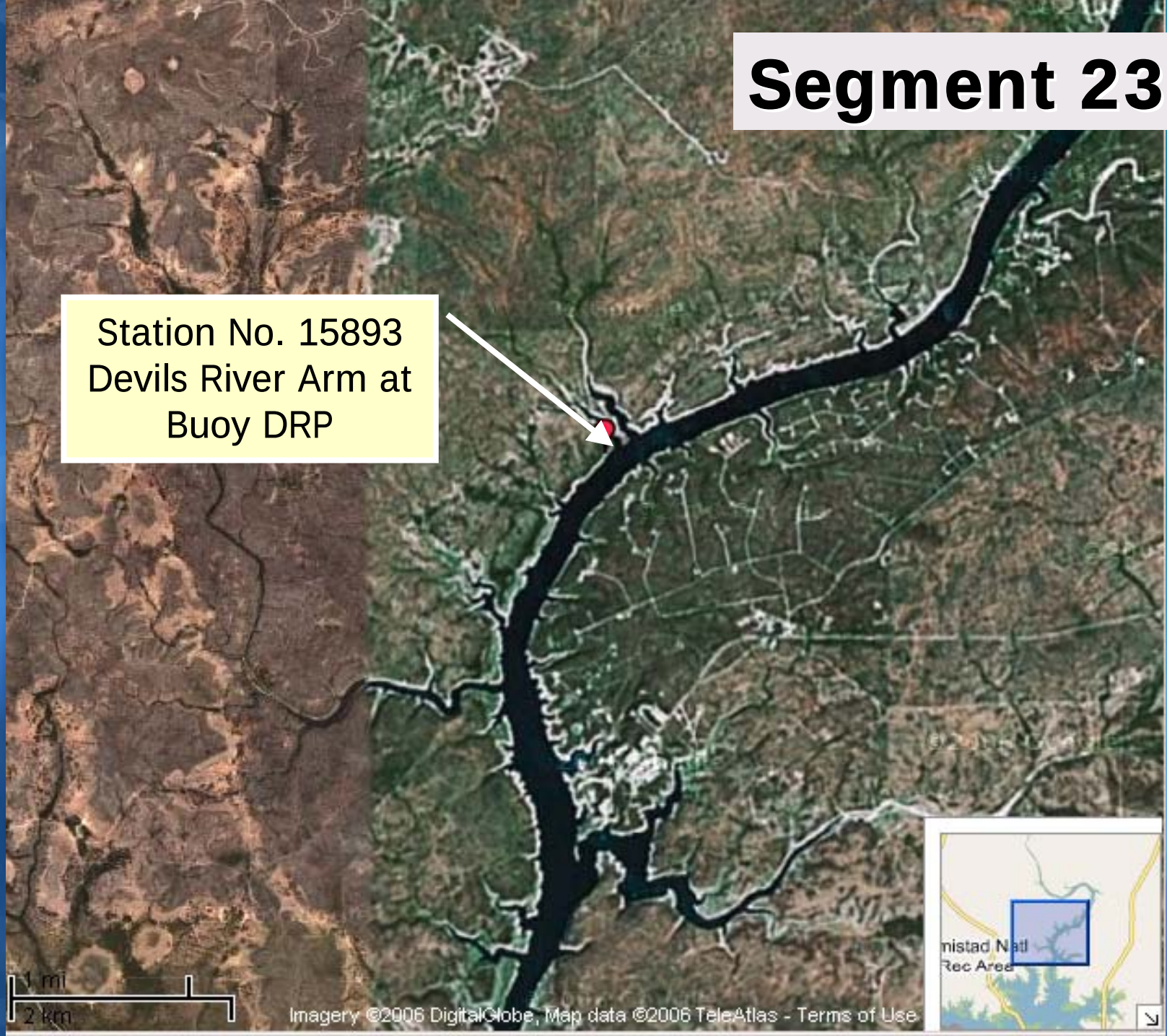

From the confluence of Little Satan Creek in Val Verde County to the Dam along the Devils River
Terrell
Brewster
Val Verde
Kinney
Maverick
13239
14942
13223
13223
13240
16379
13237
15892
15893
13835
1534015340
15821
15820
13270
1356013560
Segment 2305
From the confluence of the Pecos River in Ramsey Canyon in Val Verde County to the International Amistad Dam Total of 75 miles (120 km)

Designated Uses for Segment 2305

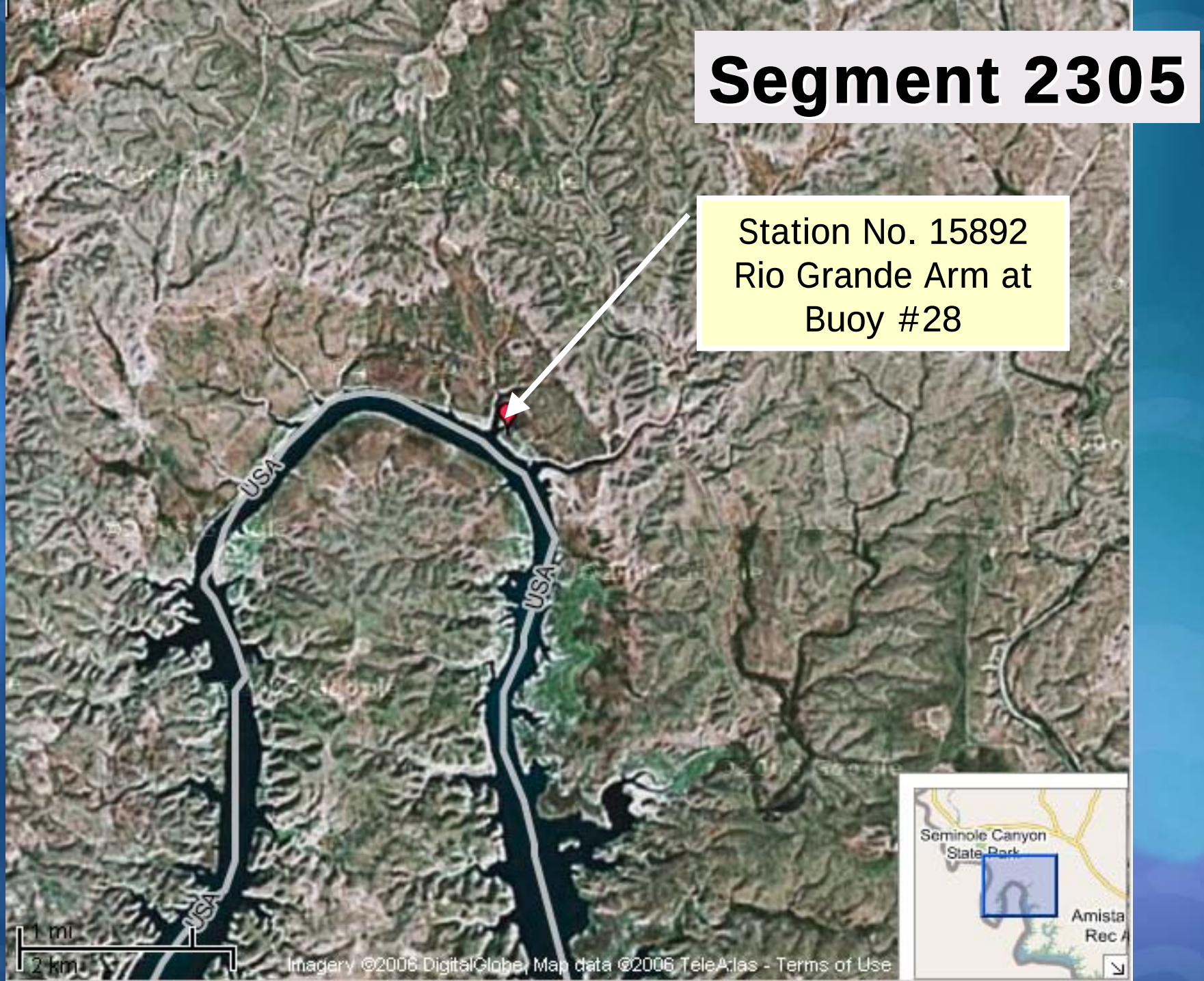
- High aquatic life
- Public water supply
- Fish consumption
- Contact recreation

Concerns: phosphorus

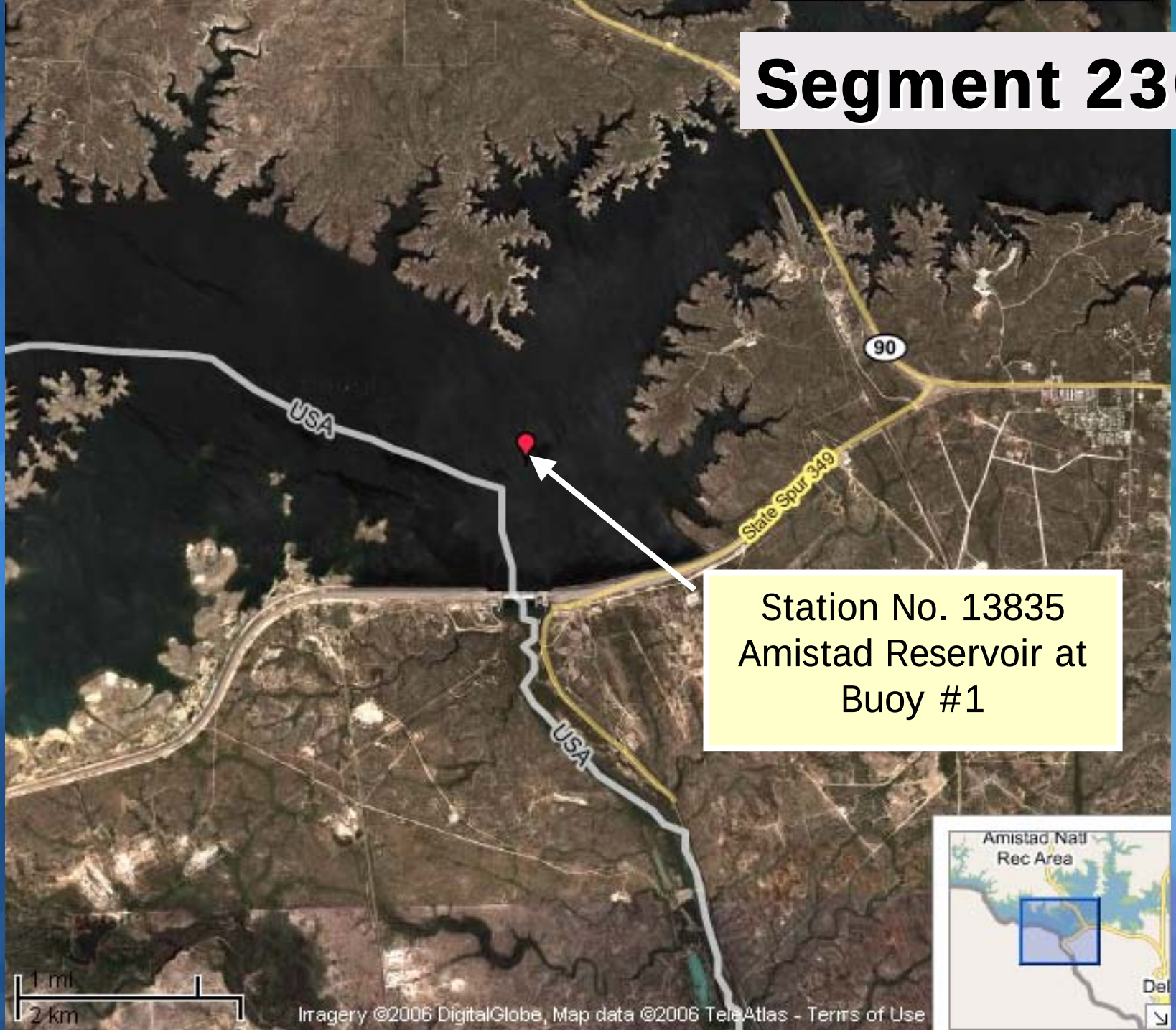
Segment 2305



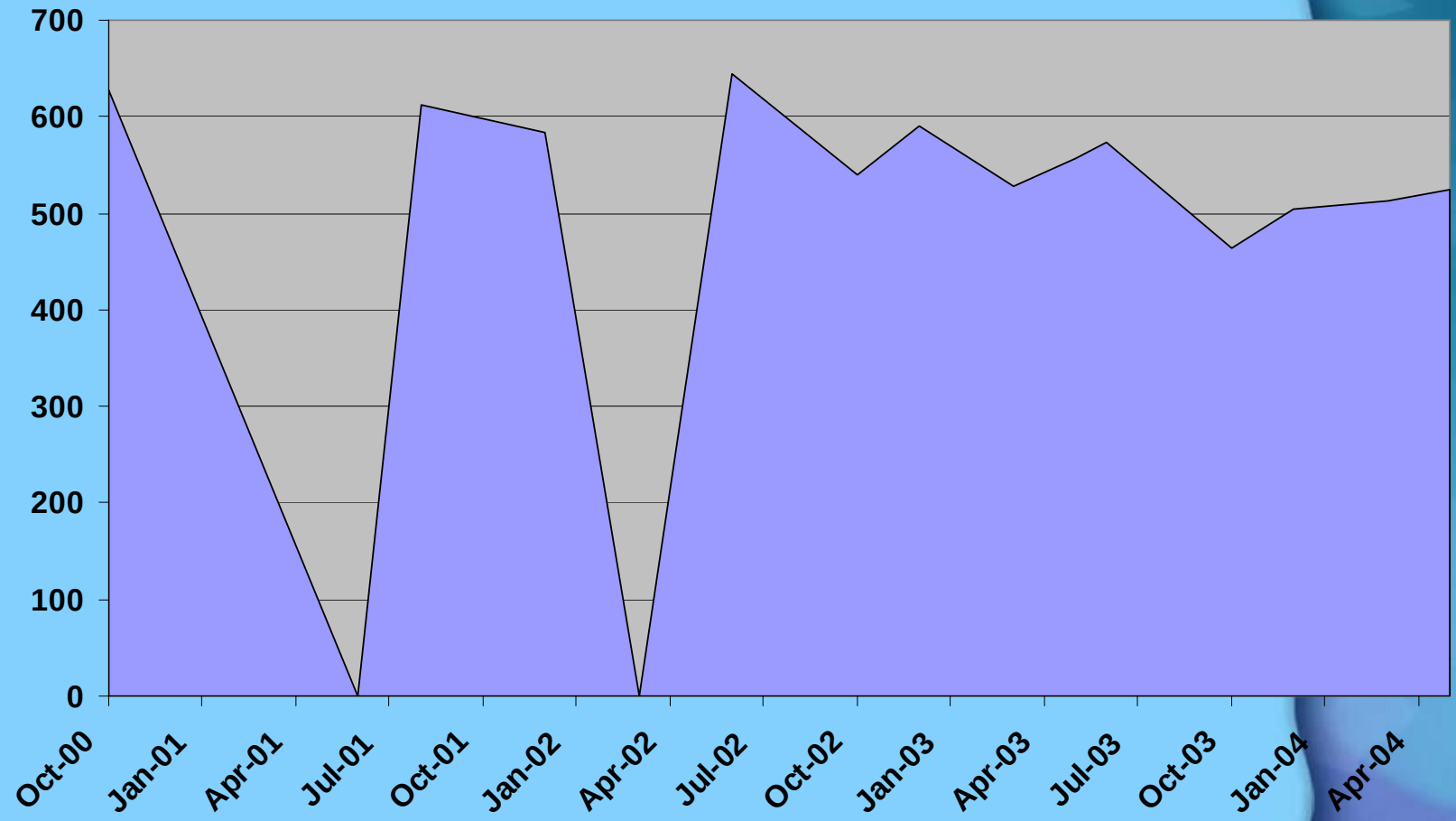
Segment 2305

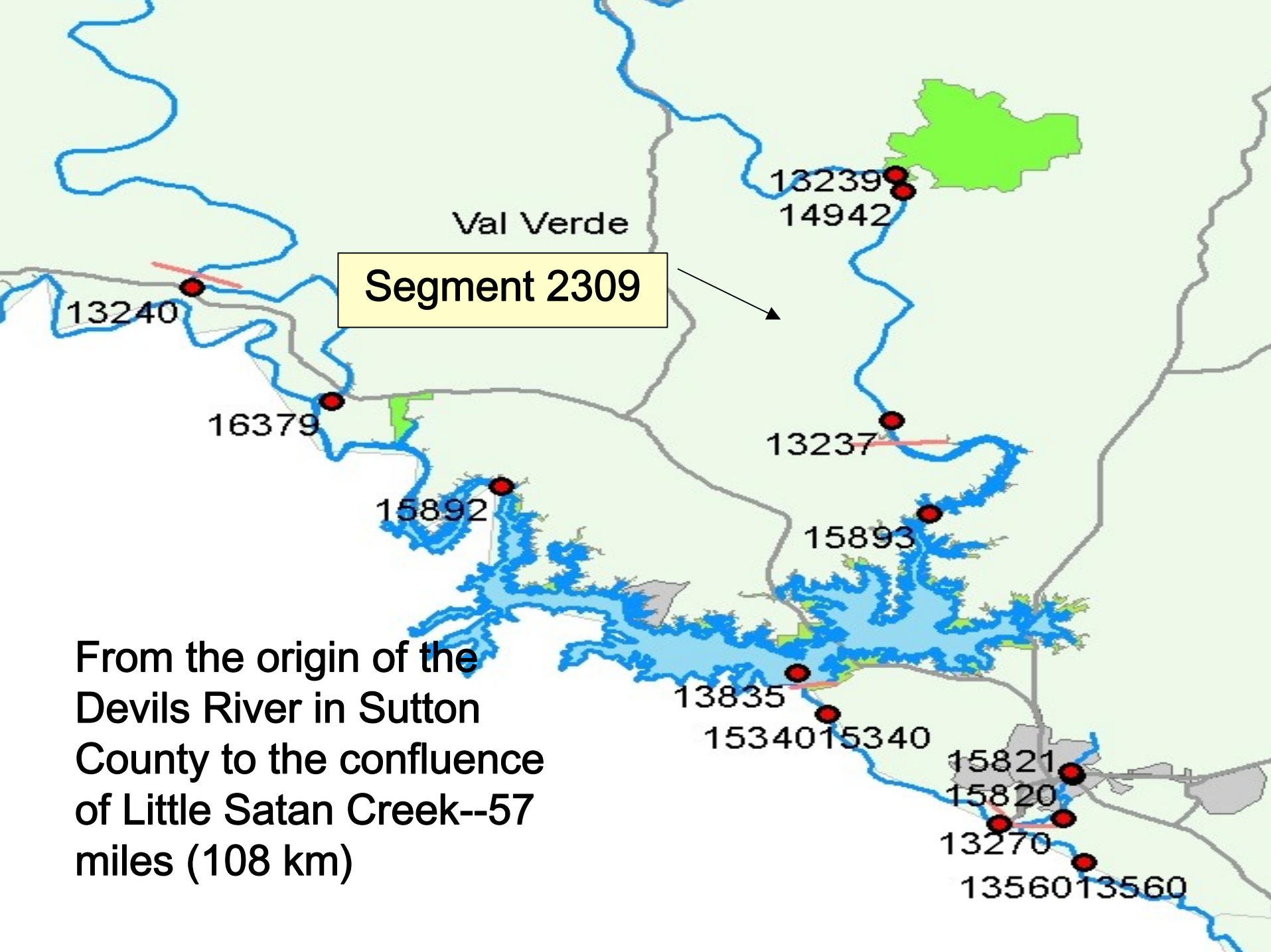


Segment 2305



TDS mg/L for Station No. 13835
October 2000 to May 2004
Average = 560 mg/L
Standard = 1500 mg/L





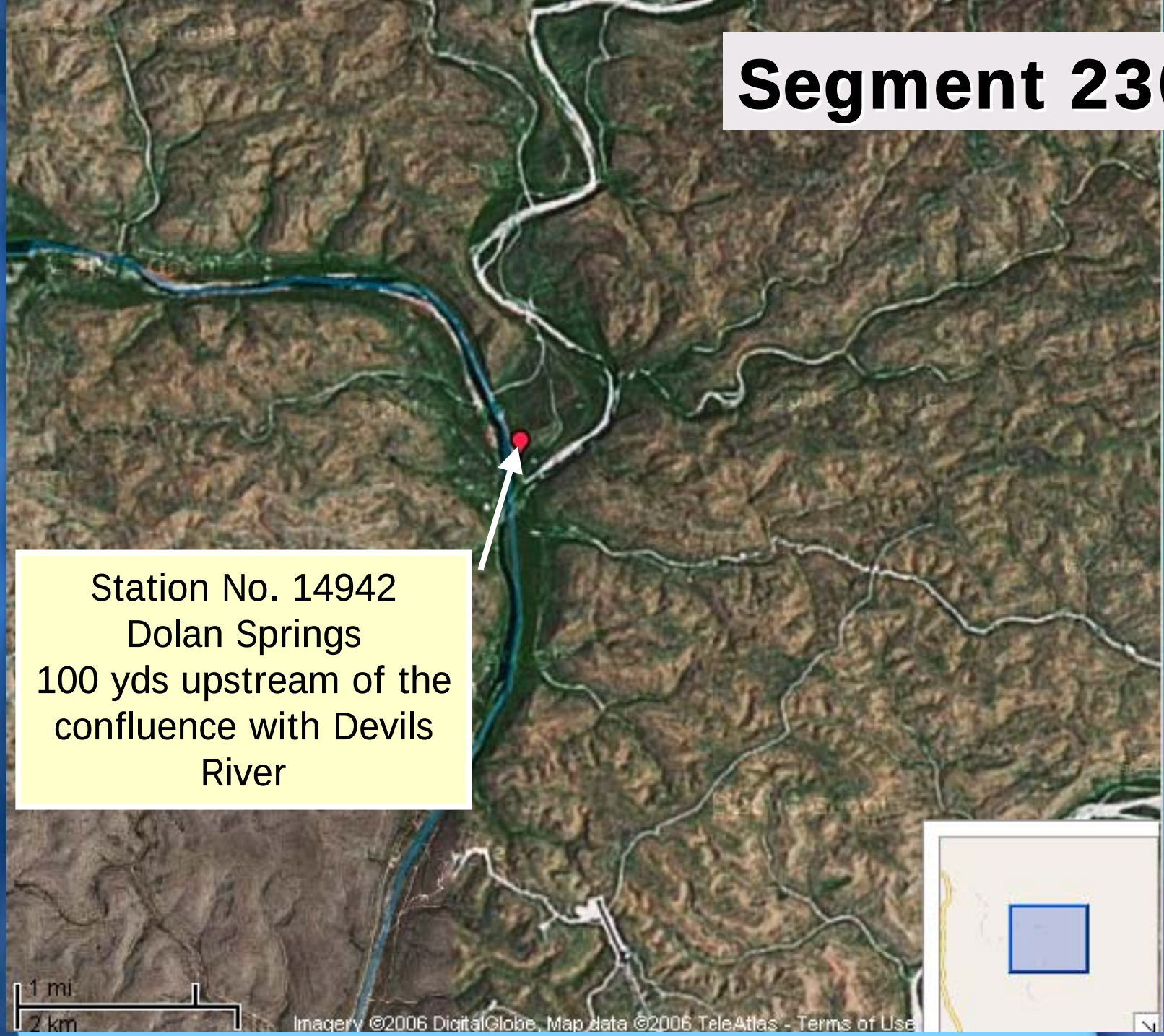
From the origin of the Devils River in Sutton County to the confluence of Little Satan Creek--57 miles (108 km)

Designated Uses for Segment 2309

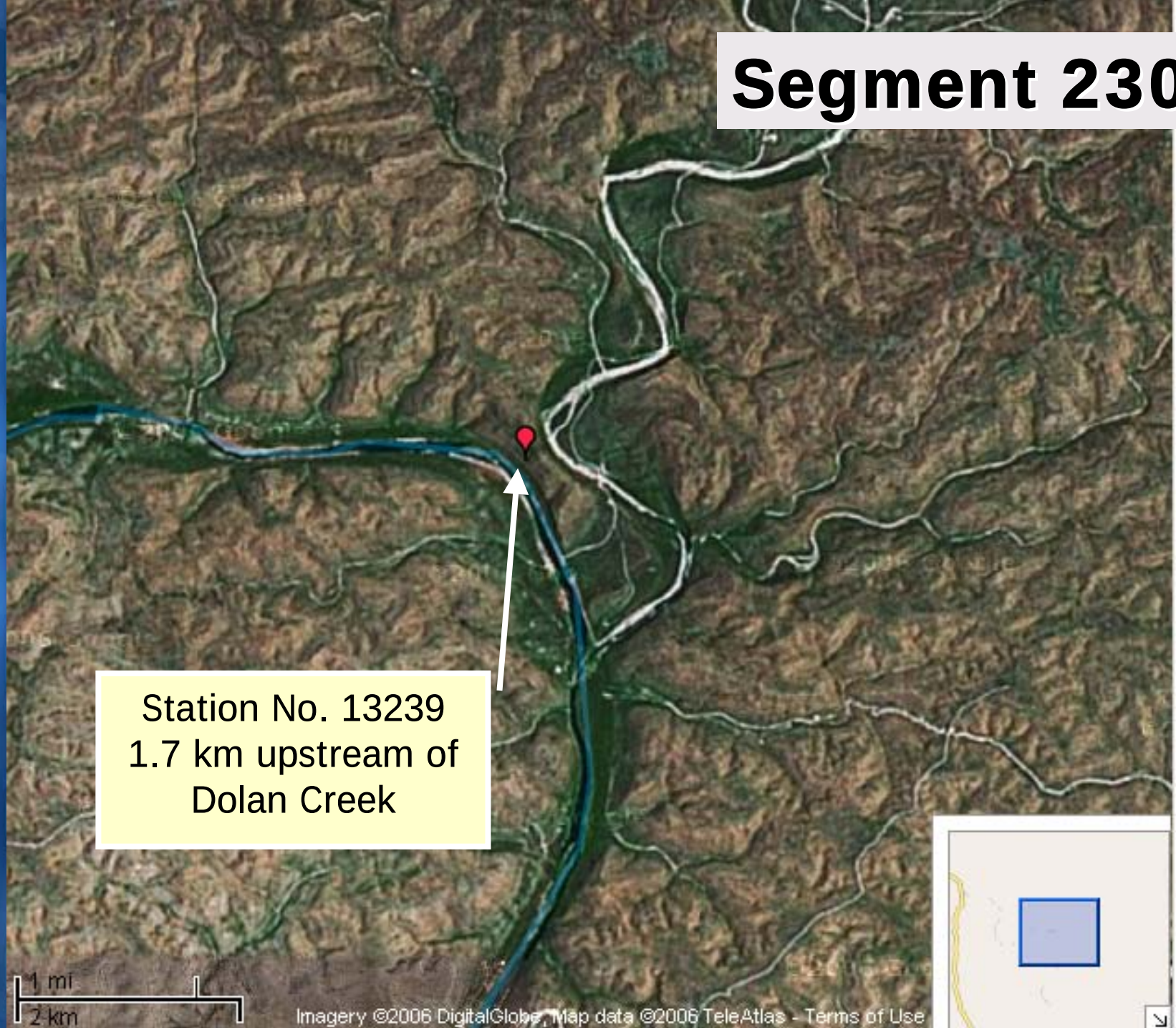
- High aquatic life
- Public water supply
- Fish consumption
- Contact recreation

Few impactors
Low TDS

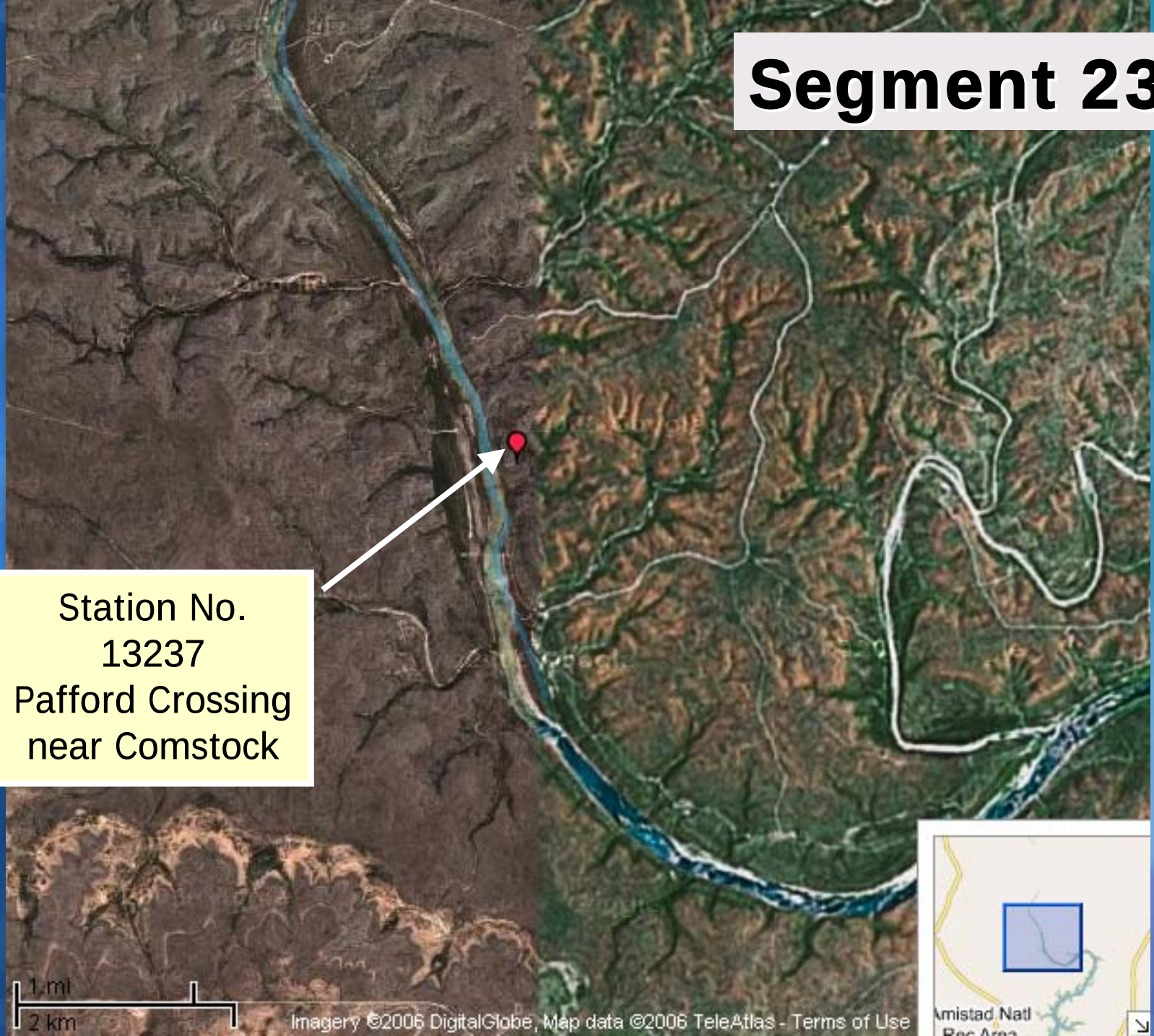
Segment 2309



Segment 2309



Segment 2309



So how's the water?

It depends on:

- River segment
- Seasonal flow
- Proximity to population centers

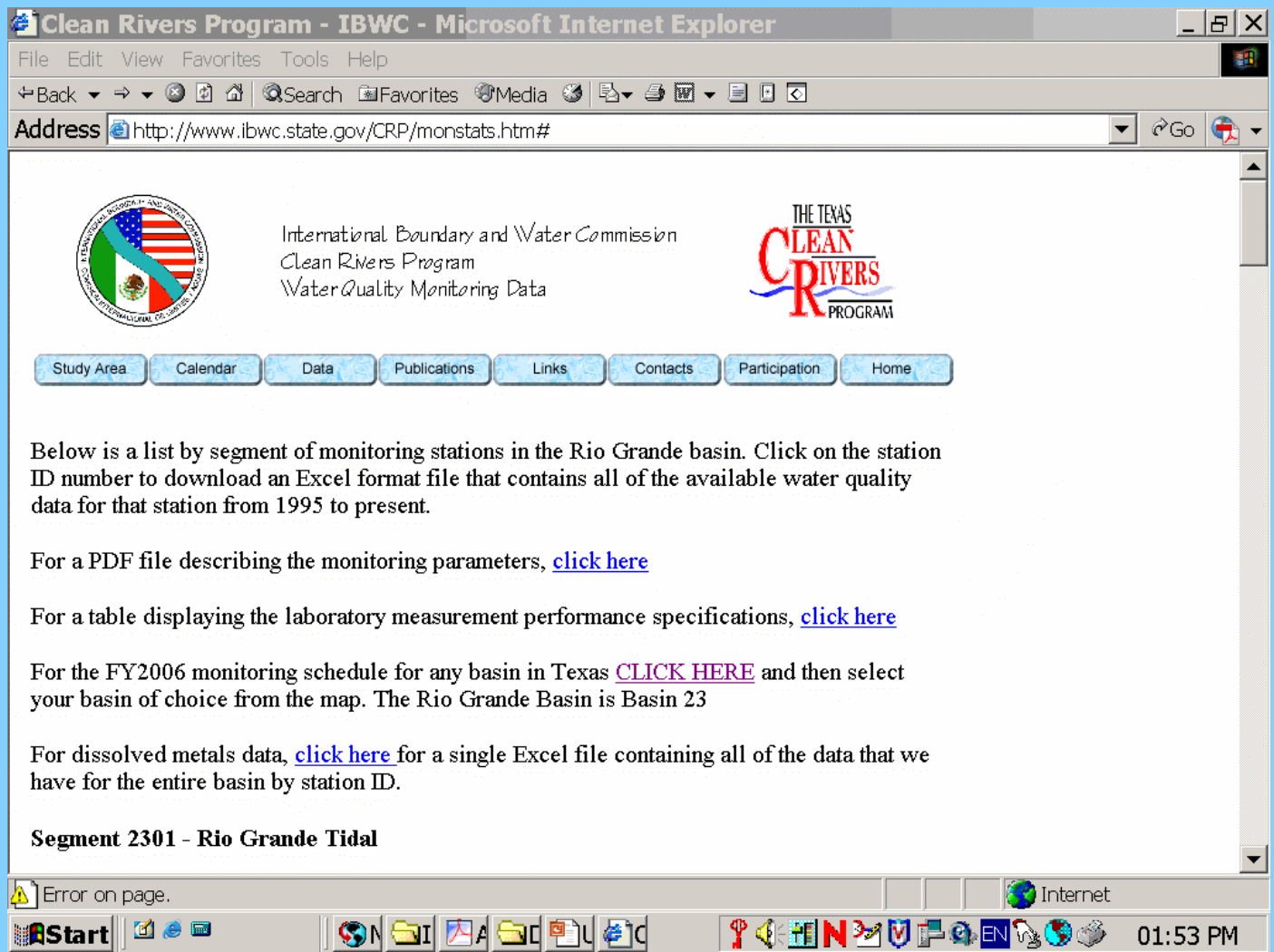
Issues to monitor:

- Bacteria
- Salinity

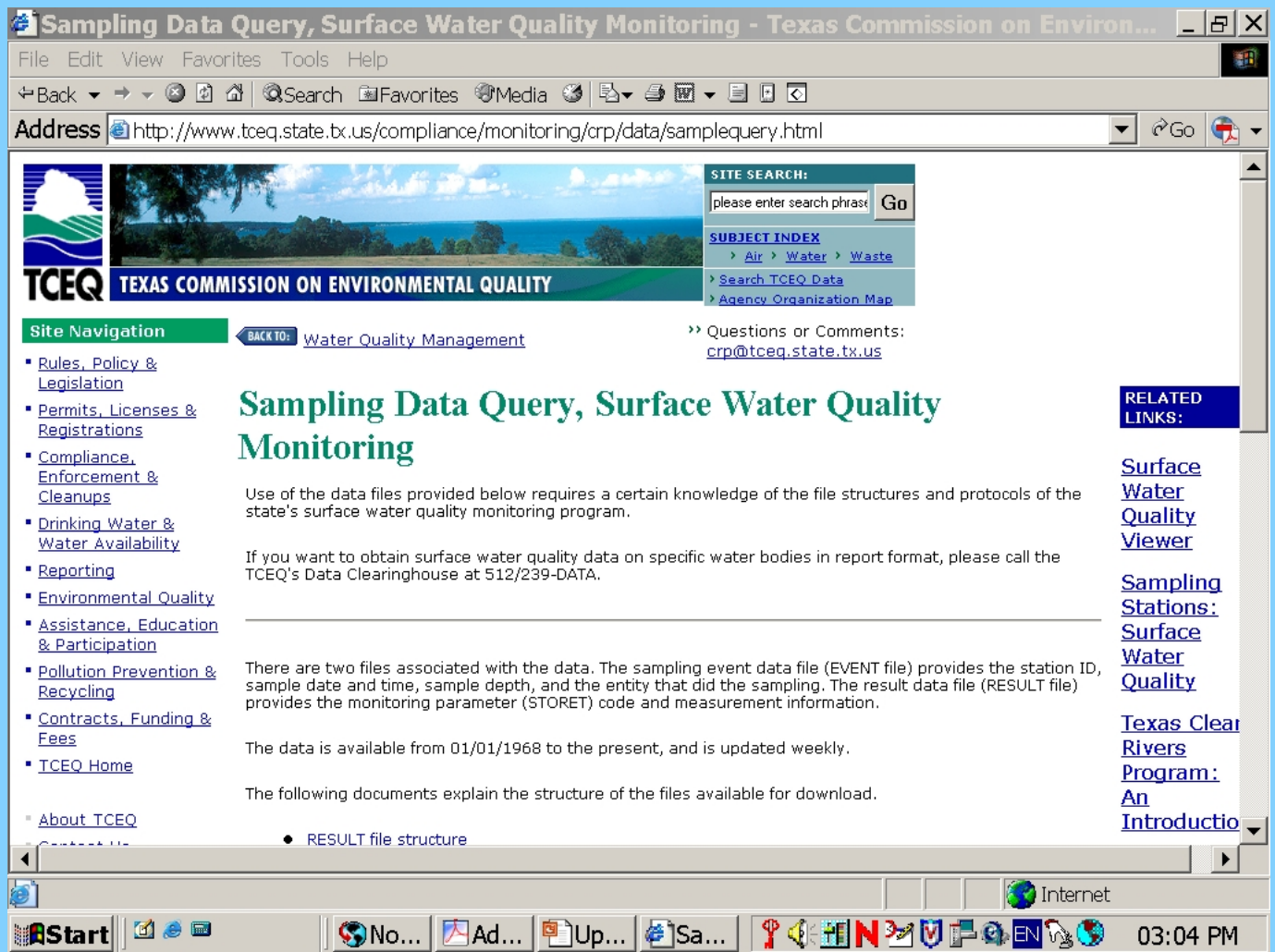
Data Locations

- Basin Highlights Report
- IBWC website
- TCEQ website

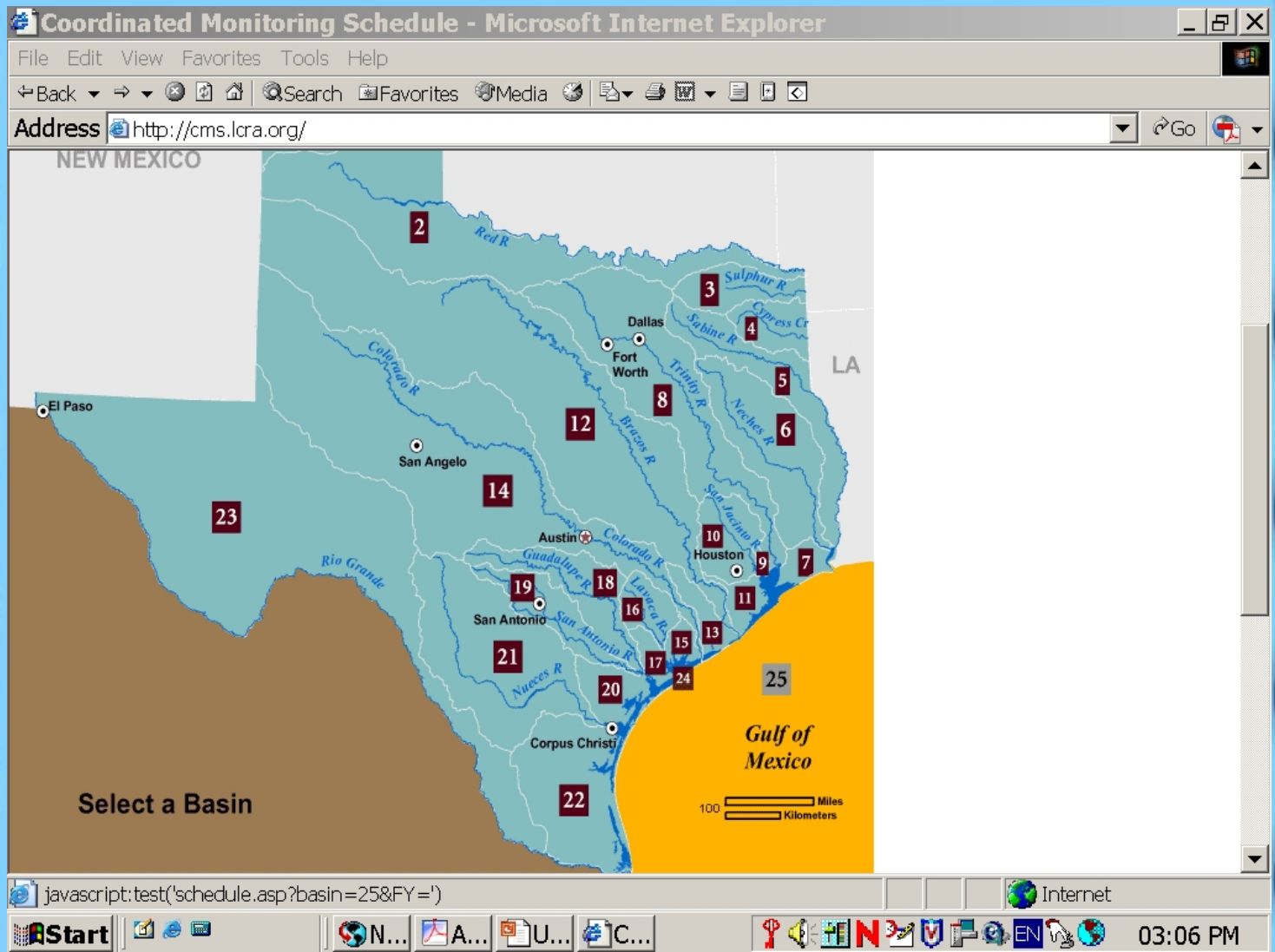
www.ibwc.state.gov/CRP/monstats.htm



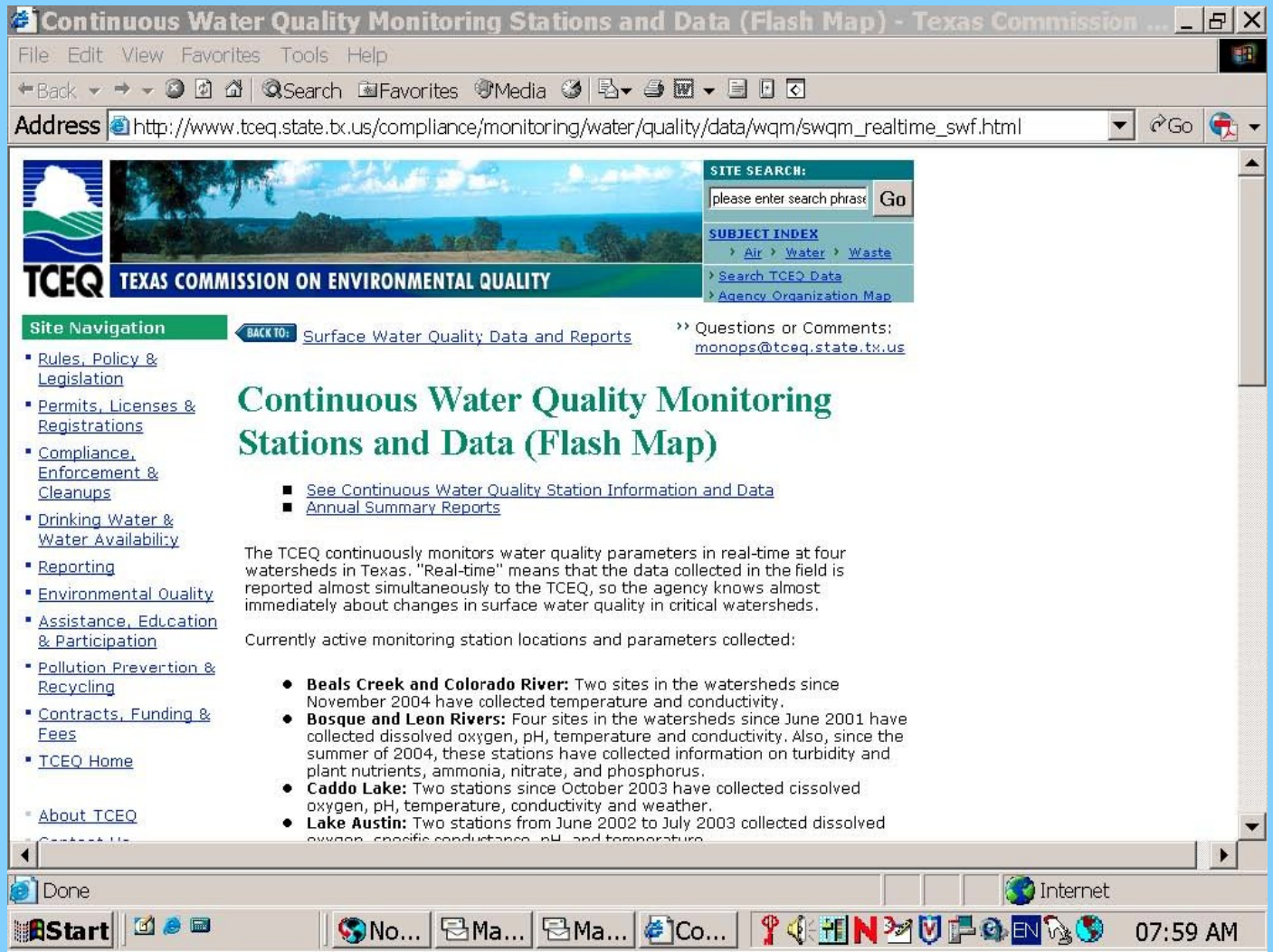
www.tceq.state.tx.us/compliance/monitoring/crp/data/storet.html



http://cms.lcra.org/



http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/wqm/swqm_realtime_swf.html



Data Locations

http://www.ibwc.state.gov/CRP/monstats.htm

Segment-by-segment list of monitoring stations in the Rio Grande basin

2. http://www.tceq.state.tx.us/compliance/monitoring/crp/data/storet.html

Monitoring Parameter Descriptions, Surface Water Quality Monitoring

3. http://cms.lcra.org/

Interactive database with more than 1,800 sites monitored by 59 agencies in TX

4. http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/wqm/swqm_realtime_swf.html

Continuous Water Quality Monitoring Stations and Data in real-time at 4 watersheds in Texas, including the Rio Grande

THE TEXAS CLEAN RIVERS PROGRAM

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Texas Clean Rivers Program

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915-831-4794

INTERNATIONAL BOUNDARY AND WATER COMMISSION
COMISION INTERNACIONAL DE LIMITES Y AGUAS

2006-2007 Monitoring Schedule

- Dropping metals analysis to focus on potential organics pollution
- Maintaining current monitoring sites
- Completing special studies

USIBWC-CRP
Quality Assurance Goals

1. Contract with laboratory for FY2007 that is NELAC (National Environmental Laboratory Accreditation Conference) certified
2. Speed up and strengthen the data collection process

- Meet quality assurance goals
- Identify errors earlier
- Quicker turnaround for getting data to the public

Texas Water Monitoring Council

Meeting Announcement

The 2006 (Sixth) Session of the Texas Water Monitoring Congress

Join us in Austin, Texas!
for The 2006
Texas Water Monitoring Congress
September 13-15, 2006

"Connecting the Dots"
Texas Water Monitoring Congress
Public Outreach Symposium
Tuesday, September 12, 2006
9:00am-4:00pm
The Commons- University of Texas, Austin

TEXAS WATCH

TCEQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Texas Water Monitoring Council

Texas Watch is a joint partnership of the TCEQ, the U.S. Environmental Protection Agency, and Texas State University - San Marcos, with the mission of expanding understanding and awareness of water quality and NPS issues across Texas. Through education, data collection, and community action, Texas Watch facilitates environmental stewardship by empowering a statewide network of concerned volunteers and partners in a collaborative effort to promote a healthy and safe environment.

Positive and productive communication between water resource managers and the public is widely acknowledged as one of the keys to protecting and improving water quality. This meeting, offered as a pre-conference symposium of the 2006 Texas Water Monitoring Congress, is the second in a series known as "Connecting the Dots", provides a forum for resolving gaps in communication between the public and local, state and federal water resource programs. The 2005 "Connecting the Dots" meeting recommended several initiatives to enhance water resource management programs' abilities to conduct enforcement, permitting, and education activities as follows:

- Improve tracking and reporting of repeat violators
- Create a central clearinghouse to guide citizens through the enforcement and response resources at environmental agencies
- Develop "cradle to grave" oversight of the permitting process
- Require developers to post a bond prior to receiving permits
- Require training of real estate agents, City/County Planners, and developers in the relevant laws and regulations as well as the cost benefits of environmentally "friendly" development.

This year's meeting features presentations on these recommendations as well as panel discussions to identify potential strategies for implementing them.

Who Should Attend? This meeting is open to the general public with a special invitation extended to both individuals who attended the 2005 "Connecting the Dots" meeting and participants in the 2006 Texas Water Monitoring Congress.

Agenda: Visit http://www.texaswatch.geo.txstate.edu/

Meeting Location: The Commons Center at the J.J. Jake Pickle Research Campus of the University of Texas at Austin. For map and directions: http://www.utexas.edu/facilities/commons/attendees.html

Registration: Please respond on or before Wednesday, September 6, by contacting Texas Watch: phone- 877/506-1401 or email- tw05@txstate.edu. We strongly encourage all participants at this meeting to attend the Texas Water Monitoring Congress. You may register for this meeting at: http://www.txwmc.org/

Lodging: http://www.utexas.edu/facilities/commons/attendees.html

Meals: Lunch is provided

EXHIBITOR Registration Form

Contact Information

Volunteers are needed to work on the preparation and planning of the Congress. If you are interested in either volunteering, being an exhibitor, or require further information please contact Robert Bradley at Robert.Bradley@txwin.net or 512-936-0870.

For further information or if you have suggestions for the Congress please contact:

Mr. Robert Bradley, Executive Secretary
Texas Water Monitoring Council
PO Box 13231
Austin, TX 78711
512-936-0870
Robert.Bradley@txwin.net

Texas Water Monitoring Council

http://www.txwmc.org

Questions?

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